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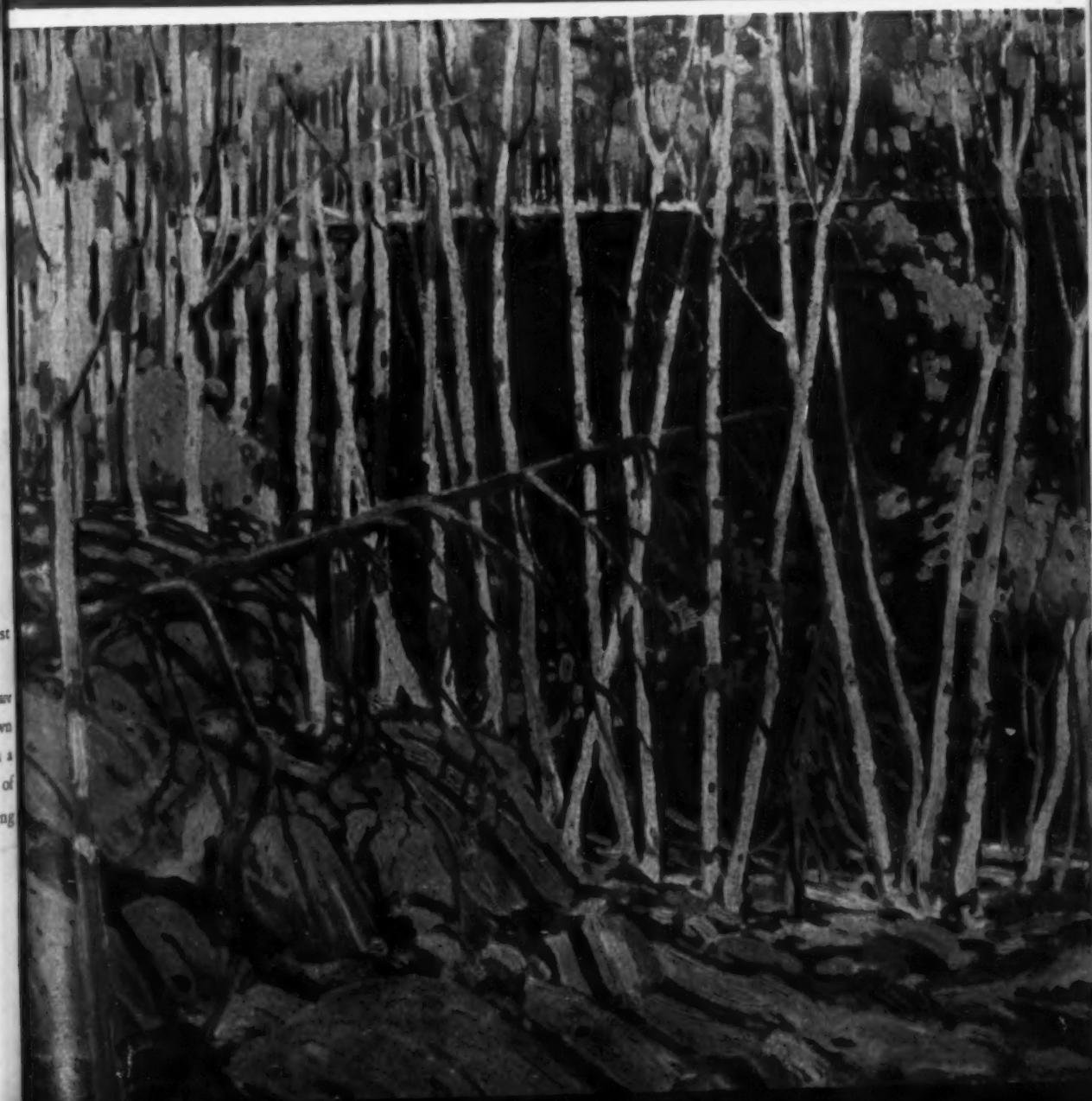

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Courtesy Gallery of the Art Association of Montreal and *The Seigneur*

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'SIGN *YOUR* NAME FOR VICTORY'

C.G.J. map

Canada's Trade with the British Dominions

by ARTHUR L. NEAL

DESPITE EARLY INDICATIONS of commercial interest between Canada and the other Dominions, the growth of trade to substantial proportions has been a development of the present century. In 1900 Canadian exports to the Dominions were valued at $2,850,000. and represented 1.6 per cent of all exports from Canada. From that time until 1929 Canadian exports to the British Dominions grew faster than those to other destinations, and in 1929 comprised 4½ per cent of the total of exports from Canada. The depression following resulted in declines, but the recovery in exports to the British Dominions was again faster and greater than the recovery in Canada's export trade generally. In 1938, the last complete peace-time year, exports to Australia, New Zealand and British South Africa reached what was, up till that time, a record figure—amounting to nearly $65,000,000., or 7.7 per cent of total exports from Canada.

Right:—Harvesting rice crops in Australia—bullock team drawing header on skids.

Individually, in that year, Australia stood in third position as a market for Canadian goods, New Zealand in sixth position and British South Africa in seventh position. As a source of imports into Canada, Australia ranked fifth among the nations in 1938, New Zealand thirteenth, and British South Africa twenty-eighth.

Australia

The principal things Canada buys from Australia include raw wool and tops, sugar, raisins, currants, hides and skins, wines and meats.

In the early years of the war, imports into Canada from Australia showed marked increases. In 1941 the total reached a value of $19,235,000. This level has not been maintained, although imports valued at $12,540,000. in 1944 were higher than in any peacetime year.

Exports from Canada to Australia have for many years exceeded imports, and have increased more rapidly during the war. As in the case of imports, however, export figures recorded in the early war years have not been maintained. Leading pre-war exports included motor-cars and trucks and parts, paper, lumber and timber, canned fish, cotton fabrics, artificial silk fabrics, machinery, electrical apparatus, asbestos manufactures, soda and compounds, cameras, films and scientific apparatus. Wartime increases were due mainly to larger exports of motor vehicles and parts for military use. Certain items which were of small consequence before the war have become important and contribute to the higher value of exports. These include guns and rifles, aluminium manufactures, aircraft, cartridges and chemicals. Most of the leading pre-war exports suffered wartime declines.

Tariff Arrangements between Canada and Australia

The maintenance and expansion of the volume of trade between Canada and Australia depend to a great extent on the reciprocal preferential tariff treatment which the two countries accord to the products of each other. Without the substantial tariff preferences now operative, it would be difficult for Australia to maintain its sales in Canada of dried and preserved fruits and sugar, which together accounted for two-thirds of Canadian pre-war imports from Australia. Similarly, our exports to Australia of automobiles, parts, cotton fabrics, machinery, lumber and newsprint paper all benefit from substantial tariff preferences against foreign competition. Without these preferences, our Australian market would undoubtedly have been smaller before the war.

Left:—Cutters laying tracks for tramway—which hauls sugar cane direct to mill without rehandling.
Above:—This sugar mill is typical of the thirty-three scattered through Australian cane-growing districts. Almost half of them are co-operatively owned.

The first preferences obtained for Canadian goods in Australia arose out of a limited exchange of preferences effected by concurrent legislation in both countries in 1925. This was superseded by a formal trade agreement signed at Ottawa in 1931. This agreement reaffirmed the principle of granting preferences. The commodities on which Canada grants special rates of duty to Australia are: butter, brandy, champagne, cheese, currants, eggs, eucalyptus oil, fresh apricots, pears, quinces, nectarines, grapes, oranges and passion fruit, dried prunes, apricots, nectarines, pears and peaches, fruit pulp, fruits in cans, gelatine, hops, rice (uncleaned), meat (fresh and canned), peanuts, raisins, sugar, tallow, veneers and wine. Preferential rates apply to imports from Canada on 420 of the 438 items of the Australian tariff. Special rates apply to 6 items and the general tariff to 12 items.

New Zealand

Trade between Canada and New Zealand expanded consistently in the years following

Left:— Typical Merino sheep. Wool provides 45 per cent of Australia's rural export, 2 per cent of its rural production, and 6 per cent of the national income. A quarter to one third of the world's wool is produced by Australia, and one-sixth of the world's flocks graze on her pastures. Bottom left:—Machine-shearing on a Victorian sheep station, Australia. Motors which power the shears can be seen in line above the shearers' heads. Below:—The presser is the hardest-worked man in the shearing shed. Here he is hauling the upper part of the press onto the lower compartment.

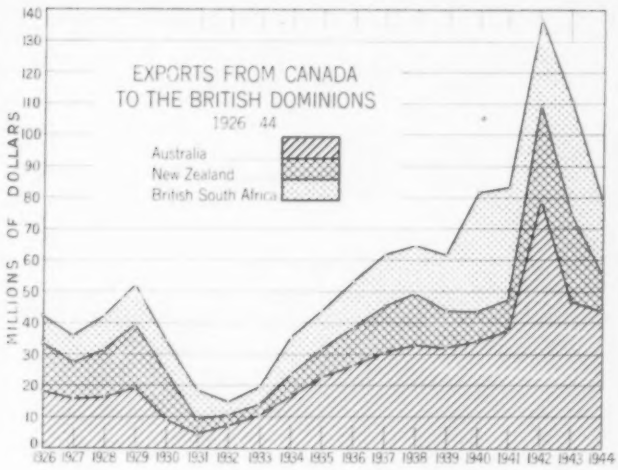
the 1914-1918 World War. Both imports and exports reached a peacetime peak in 1929, the former, in that year, amounting to $14,987,000., and the latter to $20,406,000. These figures represented 1.2 per cent of the total imports into Canada and 1.8 per cent of the total exports from Canada.

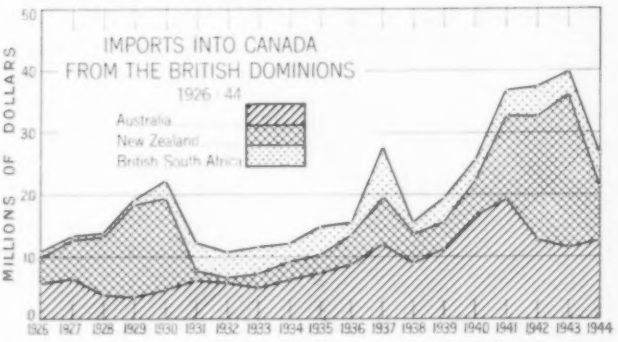
In the years following 1929, trade between Canada and New Zealand, in common with world trade generally, suffered severe declines. Recovery from the depression lows was substantial, although up to the outbreak of war the levels of 1929 had not been regained. Recovery of imports into Canada from New Zealand was retarded by a virtual cessation of imports of butter, affected first by tariff arrangements and later by voluntary controls on exports from New Zealand.

Pastoral products (dairy produce, wool and meat) comprise normally about 93 per cent of all exports from New Zealand. Such products are the main imports into Canada from New Zealand. Butter imports, valued in 1929 at $11,885,000., or 79 per cent of the total in that year, practically ceased to be imported after 1930. The last full peace year was an exception. In 1938 butter imports into Canada from New Zealand amounted to $798,117. Other imports from New Zealand in that year included meats, raw wool, sausage casings, fresh apples (which are harvested in New Zealand during the off-season for the Canadian crop), gums and resins and hides and skins. The marked increases recorded during the war years were the result of substantially greater purchases of raw wool, animal tallow, hides and skins and seeds.

The things Canada sells to New Zealand derive mainly from the Canadian manufacturing or processing industry. Motor-cars and parts, newsprint and rubber products are outstanding. Other items include canned fish, electric apparatus, machinery, rolling-mill products, artificial silk fabrics, stockings and clothing, cotton fabrics, wheat and numerous other commodities.

Normal trade between Canada and New Zealand has been seriously curtailed by the war. Wartime increases, in part mutual aid, or on Britain's or the United States' account, were due mainly to greater shipments of motor vehicles and to exports of cartridges.




IMPORTS INTO CANADA
FROM THE BRITISH DOMINIONS
1926 - 44
Australia
New Zealand
British South Africa
MILLIONS OF DOLLARS
0 10 20 30 40 50
1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944

C.G.J. charts

Tariff Relations between Canada and New Zealand

New Zealand was the first of the Dominions to follow the example of Canada and introduce into its tariff structure the principle of British preference. The Preferential and Reciprocal Trade Act of 1903 accorded preferences on a limited list of Empire products. The New Zealand Tariff Act of 1907 extended imperial preference to a large number of items, and subsequent tariff acts have tended to widen the margin of preference between British and foreign goods.

Canada was accorded the preferential rates of the New Zealand tariff from their

C.G.J. map

introduction in 1903, and in the following year Canada extended the benefits of the British Preferential Tariff to New Zealand goods. For many years these reciprocal preferences continued to be extended by each country to the other without any formal agreement being entered into between them.

A new chapter in the relations between Canada and New Zealand began in 1925, when the reduced rates granted to Australia by Canada on October 1 of that year were, from the same date, extended to New Zealand.

No attempt was made by the Canadian Government to use these concessions to bargain for better tariff treatment for Canadian goods—doubtless because New Zealand tariff rates were, in general, reasonable and Canada was enjoying a large favourable trade balance. At the next session of its Parliament, however, New Zealand increased the margin of preference on the following commodities of importance to Canadian export trade: motor-cars, bicycles, rubber tires, speedometers, gas engines and rough-sawn cedar lumber.

By 1929 it had become apparent that more stringent regulations governing the sale of Canadian milk and cream in the United States would soon exclude Canadian exporters from that market. At the same time, imports of butter into Canada from New Zealand had grown to an extent embarrassing to Canadian producers. In these circumstances, the preference concession to New Zealand was brought under serious criticism in various parts of Canada and reached a point where the Government felt it necessary to give notice, cancelling the extension of the Australian agreement to New Zealand. Subsequently, as of June 2, 1931, New Zealand cancelled most of its preferential rates to Canada.

On May 24, 1932, a new Trade Agreement was brought into force for one year

Right:—New Zealand cattle at Twilight Beach, Cape Maria Van Dieman, North Auckland

(applicable also to Western Samoa and Cook Islands), whereby Canada granted New Zealand some rates lower than, and the balance in accordance with, the British Preferential Tariff. New Zealand restored the British Preferential rates to Canada, except for six items upon which intermediate rates were conceded. A New Zealand surtax of 22½ per cent of duty (in a few instances, 5 per cent) instituted on August 18, 1930, was cancelled by a New Zealand tariff amendment of November 19, 1932, with regard to all Empire goods excepting those from Canada, Union of South Africa, Ireland, Newfoundland and India. The 1932 Trade Agreement was made for one year, but has been kept in force by various renewals. In 1937, a one-year renewal to September 30, 1938, was effected by Canada granting further reductions in duty on some New Zealand products. Another renewal to September 30, 1939, was arranged by Canada waiving exchange dumping duty on New Zealand butter and New Zealand undertaking to co-operate as far as possible by limiting shipments to proportions that would not unduly prejudice the interests of Canadian producers.

The Canada-New Zealand Trade Agreement was extended on September 30, 1941, without fixed date of expiry, to continue indefinitely until terminated on six months' notice by either party.

Licence control over imports instituted in New Zealand on December 7, 1938, to conserve overseas exchange, has continued with modifications.

British South Africa

British South Africa, as defined in the official Canadian trade statistics, includes the Union of South Africa (comprising the provinces of the Cape of Good Hope, Natal, the Transvaal, the Orange Free State and German Southwest Africa), Northern Rhodesia, Bechuanaland, Basutoland, Swaziland and Nyasaland Protectorates. Trade with Southern Rhodesia has been separately recorded since 1932. From the trading point of view, the Union is the predominant factor.

Among the buyers of Canadian goods, British South Africa has, during recent years,

Vineyard scene, Auckland, New Zealand

become of increasing importance. Exports have grown from a depression low of just under $4 ½ million to nearly $18 million in 1939—the last pre-war year—and, under the influence of wartime conditions, to more than $35 ½ million in 1943. The 1932 figure included also exports to Southern Rhodesia, which were not separately recorded at that time. In 1939 exports to Southern Rhodesia were $1,136,000., and in 1943, $1,386,000. The growth in relative importance of British South Africa as a market for Canadian goods is indicated by the fact that in 1932 exports to that area represented only 9/10 of 1 per cent of Canada's total exports, while in 1939 this had increased to nearly 2 per cent, and in 1940 to over 3 per cent.

One noteworthy feature of Canada's exports to British South Africa is the wide diversity of products included; it is doubtful if any other overseas market absorbs a greater variety of Canadian goods. Before the war, the principal items comprising Canada's exports to this area included motorcars and parts, silk socks and stockings, planks and boards, newsprint, farm implements, iron rails, electric apparatus, manufactures of artificial silk, canned fish, rubber tires and tubes, rubber boots and shoes and apples. The exigencies of war tended to curtail exports of many items—notably silk stockings, newsprint and iron rails—while exports of vehicles of iron, farm implements and tires, presumably for military vehicles, recorded substantial increases. Other important wartime exports were non-existent previously, and included large shipments of cartridges, guns, rifles and other firearms, canned vegetables, soda compounds and ships and vessels.

Imports into Canada from British South Africa have not shown the same growth as exports and are normally lower in value, giving Canada a favourable balance of visible trade. It should be remembered, however, that South Africa's most important export commodity is gold, which has certain peculiar attributes in trade, owing to the fact of its being a money metal. Exports of gold (almost all of which is shipped to London) normally account for more than half of South Africa's total exports. Because of the high value of its gold and other mineral production, South Africa has invar-

New Zealand apples being packed for export —to meet a seasonal trade.

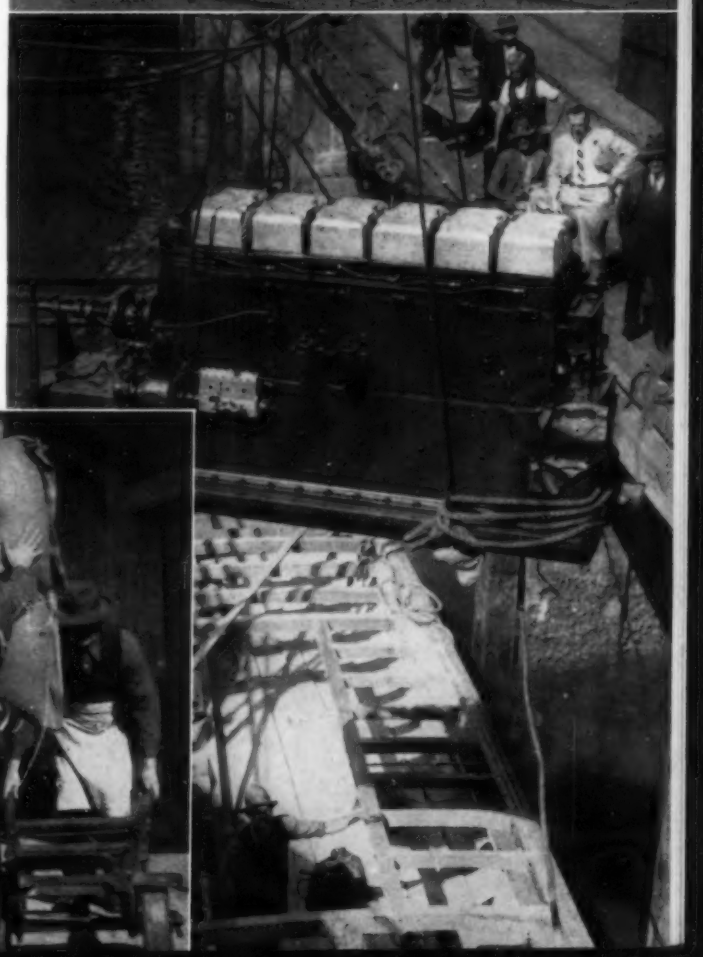
iably a favourable balance of trade in total, although its commercial relationships with many countries, including Canada, are triangular.

Canada's principal import from British South Africa normally is corn, which in 1939 was valued at $2,705,000., or 68 per cent of the total imports from that country. Other important imports were: sugar, $652,000.; raw wool, $105,000.; chrome ore, $171,000. Small quantities of wines and spirits, hides and skins, and diamonds are also imported.

Canada's trade with Southern Rhodesia is of small proportions. Of the total exports to that country valued at $1,136,000. in 1939, motor vehicles and parts accounted for $553,000.; silk socks and stockings, $107,000.; and electric apparatus, $41,000. Of the total imports of $717. in 1939, unmanufactured tobacco comprised $660.

South African Tariffs and Commercial Arrangements with Canada.

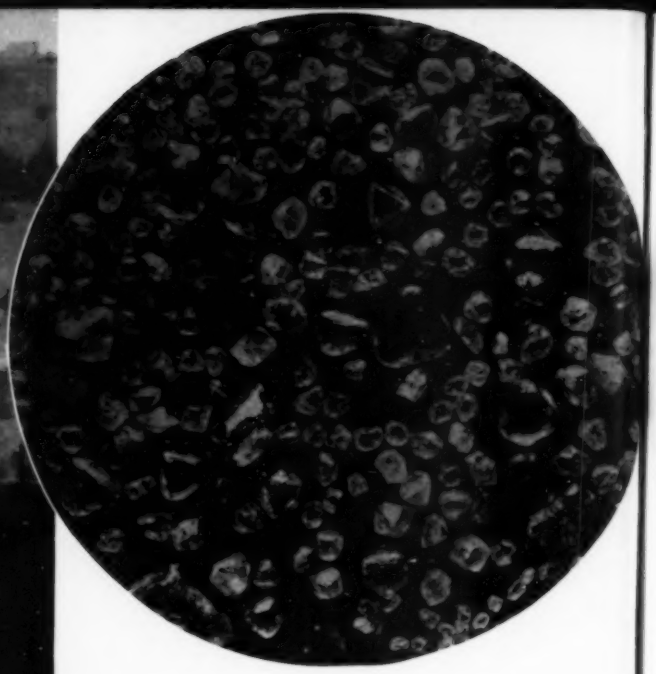
Although protective duties had been imposed in the Union of South Africa on some important goods previously, the first Customs Tariff Act that was primarily designed to encourage industrial development was passed in 1925. This act made provision for preference as a fundamental factor in tariff policy. In addition to extending preference



Top:—Unloading motor tires from Canada at Auckland.

Centre:—Canadian marine diesel engine being lowered into hull at Auckland.

Below:—Unloading Canadian wheat at Auckland.



Open diamond mine, Kimberley, South Africa —and display of some of its diamonds

to a list of scheduled goods produced and manufactured in the United Kingdom, it provided for the extension of equivalent reciprocal privileges between the Union and any British Dominion, Colony or possession.

While preferences were granted to British goods in the Cape Colony for a long period prior to 1855, and the Reciprocal Tariff of Canada, in operation from April 22, 1897, to August 1, 1898, was extended to the South African Republic, on account of a British-favoured-nation treaty, exchange of tariff preferences between Canada and the territory now constituting the Union of South Africa may be said to date from 1904.

In 1910 the Cape of Good Hope, Natal, the Transvaal, and the Orange River Colony were constituted the Union of South Africa. The Union granted British Preferential rebates, usually of 3 per cent *ad valorem*, until 1925, when a new tariff structure was adopted.

Deck-load of 2,500,000 feet of British Columbia's timber—for Australia

Canadian newsprint ready for export to sister-Dominions

C.G.J. map

Canadian-South African Agreement of 1932

As an outcome of the Imperial Conference held at Ottawa in 1932, the preferences extended to the United Kingdom and the Dominions were abandoned in favour of specific trade agreements; such agreements have been entered into between the Union and Canada, Great Britain and Northern Ireland, and Eire.

The first formal trade agreement between Canada and the Union of South Africa was signed at Ottawa on August 20, 1932. Schedule A of this agreement contains 46 items on which Canada agrees to apply to South African goods either free entry, specified rates (some seasonal), or British Preferential rates. There is a guarantee on scheduled goods of lowest rates (excluding concessions to British West Indies) and maintenance of margins of existing preference against foreign goods.

Canada retained former margins of preference in the Union of South Africa on wheat, flour of wheat, hosiery, binder twine, iron and steel pipes and fittings, electric cooking and heating apparatus, mechanics' tools, white lead, tires and tubes, newsprint and unmanufactured wood, and an increase in the former preference on canned salmon and sardines and on unmanufactured soft wood. New preferences were obtained on apples, elevating machinery, electric vacuum cleaners, electric batteries, rubber-soled canvas shoes, garden hose, mosquito netting, shingles, citrus fruit, packing boxes and ice chests. The group of items on which Canada was guaranteed the lowest rate of duty (that is to say, any preference that might be created would be given to Canada) was tinned vegetables, cash registers, non-skid chains, agricultural implements, cream separators, toilet preparations, boots and shoes, wooden handles, flooring, various classes of paper and board, and also motor vehicles. As

General view of peanut cultivation in South Africa

regards motor vehicles, there was already a concession in respect of customs valuation. The current domestic value in the exporting country is the normal value for duty in South Africa, but under the agreement a deduction is allowed from the home-consumption price in Canada of the amount of any Canadian duty drawback allowed on export.

By exchange of notes in 1935 between the Union of South Africa and Canada, each Dominion assured the other of as low rates of duty as applied to any foreign country.

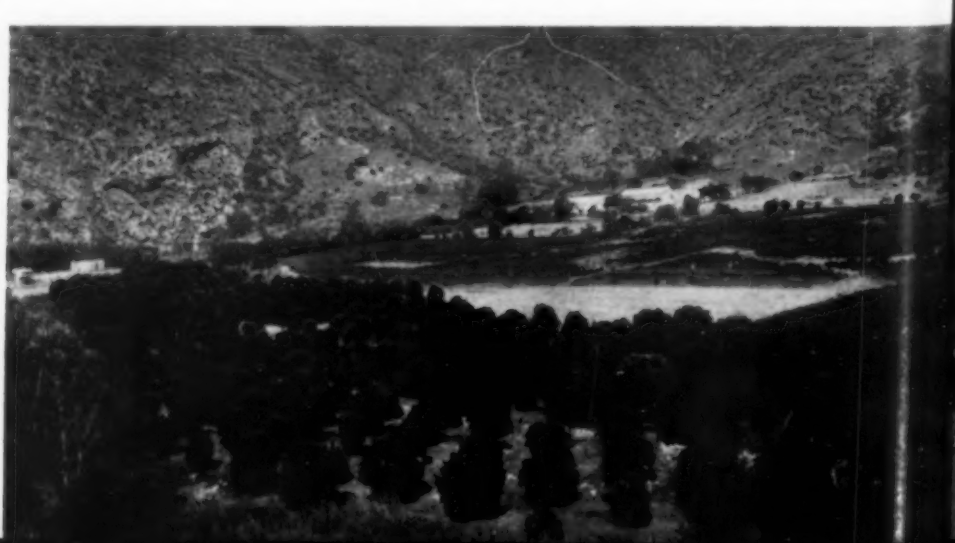
Trade Agreement with Southern Rhodesia

A formal trade agreement was entered into between Canada and Southern Rhodesia on August 20, 1932, at the conclusion of the Imperial Economic Conference in Ottawa. This agreement confirms exchange of British Preferential rates between the two Dominions, with minor exceptions, and also contains schedules of special reciprocal concessions.

As from January 2, 1938, on notice by Southern Rhodesia, the trade agreement was cancelled. However, Southern Rhodesia, under a new tariff of 331 items adopted May 18, 1937, accords Canada and the United Kingdom the same preferences over foreign countries on 177 tariff items. On 78 items Canada has a rate intermediate between the United Kingdom and foreign countries. On 10 items Canada has no preference over foreign countries, although the United Kingdom has preference. On the remaining 66 items the rates are the same to all countries. Canada, under the Tariff Act of 1907, applies the British Preferential Tariff to Southern Rhodesian goods.

Post-war Outlook

For the other British Dominions, as for Canada, external trade has traditionally been of extremely great importance. For all the Dominions a high level of exports is regarded as essential for high employment and high incomes. At the same time, each Dominion has been dependent upon import



Citrus farm and environs, Cape Province, South Africa

Above:—A close-up of New Zealand's high-grade fleece

Right:—A flock of New Zealand sheep

sources for a wide range of products to support standards of living. In these circumstances, it is clear beyond doubt that the economic well-being of all is closely bound up with world prosperity and a flourishing international trade.

Trade between Canada and the other Dominions in the post-war era will be subject to three considerations which now have somewhat greater urgency than before the war. The first of these considerations is the shortage in countries of the sterling area of exchange to make payments in the United States and Canada. Australia, New Zealand and South Africa are all members of the sterling area; that is to say, their receipts of Canadian dollars from the sale of merchandise to Canada are pooled along with the receipts of other members of the sterling area, and payments to non-sterling countries are made by drawing upon this pool.

Quite apart from the mechanics of the sterling area, however, a payments problem arises out of the breakdown of the multilateral system of settling international accounts which prevailed before the war,

Yews and lambs in picturesque South African setting

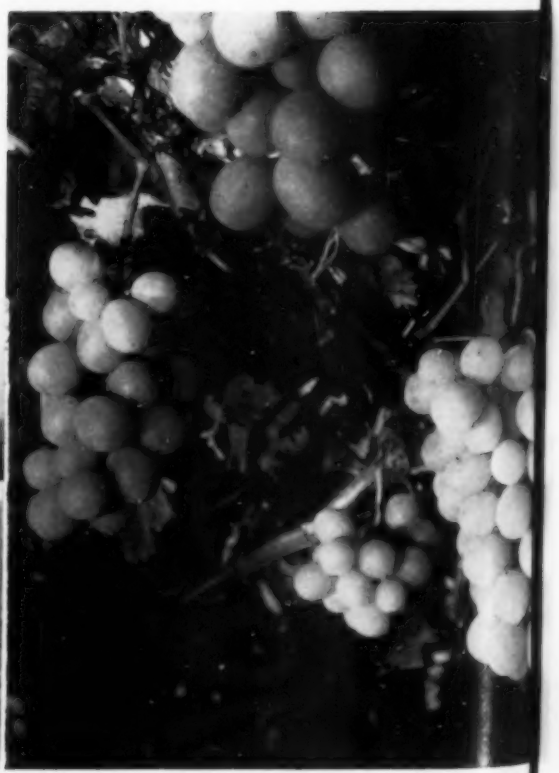
SCENES DEPICTING SOUTH AFRICA'S DRIED-FRUIT INDUSTRY

Above:—A field warehouse

Right:—Raisin-making—grapes being dried in the sun.

Right:—A close-up of the White Prince variety of grapes

Below:—In warm regions, sultanas are protected from the sun—as shown here.



under which it was possible for a country to use the proceeds of its sales in one country to pay for purchases in another.

The United Kingdom was by far the largest market for the products of the Dominions, and is likely to remain so. Before the war, Australia, New Zealand, and British South Africa all customarily sold more to the United Kingdom than they bought from that source. The proceeds from these surpluses of exports were used in part to settle accounts with other countries, including Canada, from whom they bought more than they sold. This was possible because the United Kingdom pound sterling was freely convertible into other currencies. That is, any one having pounds could exchange them for dollars.

The war has resulted in a great loss of income to the United Kingdom from exports of goods and services, interest on foreign investments, earnings of merchant shipping, and other sources. Part of this loss is temporary, but there is a danger that some will be permanent. There is no longer the same quantity of other currencies available in London, and the British pound has become, for the time being, no longer freely convertible. On this account, the amount of Canadian money available to Australia, New Zealand, and British South Africa for the purchase of Canadian goods is limited.

This problem is serious, but should not be exaggerated. It is being painstakingly studied in all parts of the English-speaking world, and is not permanently insoluble.

Another uncertainty in the post-war outlook is the future influence of the British Preferential Tariff in the Dominions. During the progress of the war, the effects of various tariffs have been largely nullified by the operation of import licensing systems and other measures of wartime control. The Canadian Trade Commissioner in Australia reports, for example, that during the war the administrative control exercised over the Australian industry and import trade has been such that the tariff has ceased, for the time being, to be a factor in the regulation of imports or of the development of industry. The same is true in the other Dominions, and, for that matter, in most other countries. Some of the wartime controls will probably remain in force for at least a few years during the transitional period. Even after that it may well be that preferential tariffs will exercise somewhat less influence on the direction of trade than formerly. Most British countries support, in principle, a tendency in world commercial policy towards the general lowering of tariff barriers, and it is most unlikely that such a tendency could become generally effective without some revision of the British Empire Preferences. On the other hand, if there should develop a tendency towards protectionism in the British Commonwealth, there is danger that the preferential rates would tend to lose their significance as essentially low tariffs, and become merely somewhat lower protective duties.

A third factor of paramount interest to Canadian exporters is the acceleration of the tendency towards industrialization in all of the British Dominions. Industrial efforts in these countries during the war have produced an increased variety of goods. In Australia, for example, such products include textiles, apparel, steel cables, tool steels, alloys, bearings, explosives, small arms, precision instruments, optical instruments, armoured fighting vehicles, tanks, wireless sets, planes and machine tools. Before the war there was no mass production in heavy industries, but now steel production has become Australia's most important secondary industry and produces many types formerly imported. Indeed, certain iron and steel products are now produced at lower cost in Australia than in other important producing countries. Australia's first newsprint mill is now operating, and the Government has announced that it wishes to have complete motor-cars produced within the Commonwealth. A similar tendency to press the development of industrialization has been evident also in New Zealand and the Union of South Africa.

The Australian Government has stated its adherence to the principle of full em-

ployment, and has indicated that whatever action it may take in the field of inter-nation collaboration will rest on a basic determination to avoid unemployment within the country. The Australian Tariff Board has been active in investigating opportunities for establishing even more industry in Australia to produce goods formerly imported.

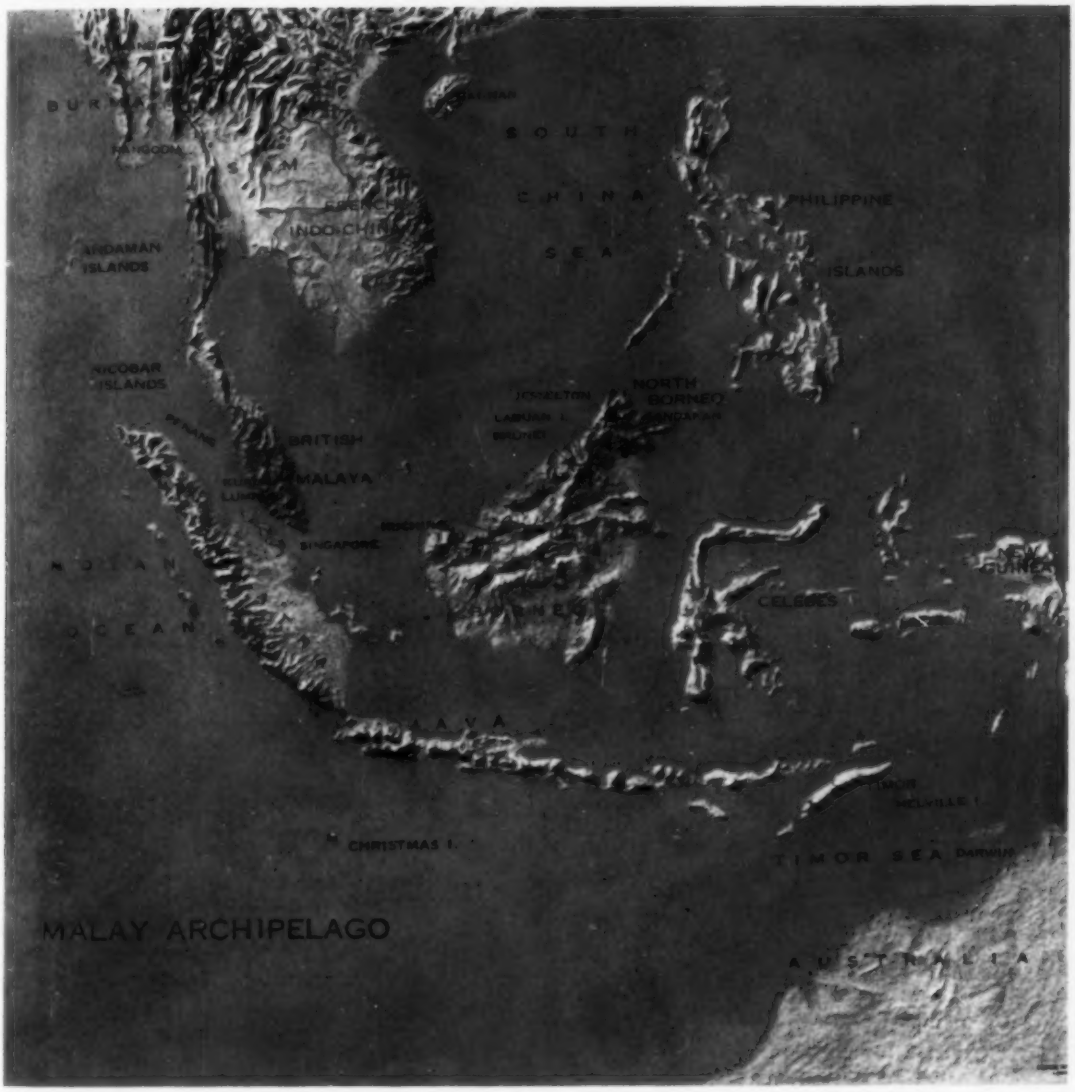
It may, therefore, happen that the market in the British Dominions for certain imported goods will be smaller than before the war. It does not necessarily follow that the total import market in these areas will likewise be smaller. On the contrary, if the increasing industrial development results in increasing prosperity and high purchasing power, it is to be hoped that total markets will expand, as was the case in the earlier development of Canadian industry, when growth of imports paralleled the growth of industrial production.

In this connection, Mr. C. B. Birkett, Acting Canadian Trade Commissioner at Auckland, New Zealand, has recently stated the case with respect to New Zealand—but it also applies to the other Dominions. Mr. Birkett said:

> "Many authorities are of the opinion that the local manufacture of a considerable percentage of the classes of goods formerly imported, and the importation of capital and producer goods in their place, will not adversely affect the interests of former exporters to this market but will merely alter the pattern of their trade. On the other hand, there is a strong opinion that the retention of a great number of the industries now operating would be inimical to the best interests of the Dominion, particularly because of high production costs and the loss of business by former suppliers who are also importers of New Zealand produce."

In conclusion, it is worth repeating that all the British Dominions have a vital and imperative interest in the maintenance of world trade at a high level. As to trade between Canada and her sister Dominions, there have always been difficulties and problems, but while they may take new forms, there is no reason to doubt that, with ingenuity and determination, solutions will again be found.

Motor vehicles—assembled from parts imported from Canada—loaded on a freight train at Port Elizabeth, South Africa, for delivery to other parts of the Union.



*Malaya, Land of "Perpetual Afternoons"**

by ASHLEY GIBSON

THE MALAY PENINSULA, a prolongation of southeast Asia with an area about the size of England, divides the South China Sea from the Bay of Bengal like a long arm with its finger-tip (at Singapore) pointing between the huge island masses of Sumatra (separated by the narrow Malacca Straits) and Borneo across the wide-flung East Indies Archipelago to Australia in the comparatively near distance.

The strategic implications of such a setting need not be emphasized. This prosperous, hitherto peaceful and lovely land where it seemed "always afternoon"—overrun

*This article was written prior to the surrender of Japan.

three years ago in a campaign that showed up tragically the exiguous nature of British defences in an area to which, at that stage of crisis in the West, no priorities could be conceded—is about to be wrested back from the invader, its enslaved populations unshackled, British men and women rescued from the barbarism of its prison camps, its wealth of tin and rubber denied to the Japanese as war materials.

The miserable enemy, quaking at home under the daily rain of death and destruction falling on him from the heavens, sees the richest and most dazzling of his early conquests about to slide from his grasp, and himself practically powerless to hold apart the pincers now formidably closing—pincers formed by MacArthur's Australians in Borneo and the British, Indian, and West African Forces in Burma, with massed air and sea armadas available to speed their movement.

Ancient Portuguese Prize

First European foothold on the mainland of Malaya was gained by the Portuguese when, in A.D. 1511, Albuquerque, most enterprising of their commanders in that age of exploration and conquest, ventured his tiny ships right round the Cape to India and on to Malacca, then richest port of the East and centre of the spice trade, which he took by storm with a small force. The Portuguese retained this valuable prize until the Dutch, their empire in these seas waxing as that of Portugal waned, took the city in 1640 after a desperate siege. In the chances and changes of the Napoleonic wars Malacca passed into British hands, became Dutch again for a year or two in exchange for concessions elsewhere, then permanently British.

But Malacca's former greatness and wealth were not to be regained. Away to the northwest, beyond the pirate-infested narrows of the Malacca Straits, Penang Island had been ceded by the Sultan of Kedah to the British East India Company in 1786 through the good offices of Captain Francis Light. Known in the beginning as Georgetown, its port and capital grew quickly as a trading centre, while flourishing clove and pepper plantations were established on the hilly ground behind the town.

Yet Penang was further north even than Malacca, and the seaward approach to both was menaced (as was to be the case for another half century) by the blood-thirsty pirates and marauders whose long *prahus* lay in wait behind the screen of mangroves a mile or two up every little river running down into the Straits from the mountains of Sumatra and the mainland.

Penang, therefore, was not, and could never become, the perfect *entrepôt* for Britain's rapidly expanding traffic with the Far East. No one saw that more clearly than

Singapore — view of the waterfront from Anderson Bridge

ast meets West at ingapore, "Clap- am Junction" of the ast. Singapore aterfront, as seen om the harbour, howing Ocean uilding, P. & O. ffices, Shell House, ifford Pier, Union uilding, Hong Kong ank Building, llerton Building, nderson Bridge.

Stamford Raffles, the young East India Company cadet, who probably combined in his own rather frail person more remarkable qualities of intellect, vision and statesmanship than any of that long line of first-rate administrators who followed in his footsteps.

"Half-way House" of the East

What Raffles was looking for was a "half-way house" between India and China where merchants could take up their residence, officials establish a centre for local government, and the shipping of all nations enjoy safe and convenient harbourage. Seeking diligently, he found, in 1819, the ideal site for this purpose on Singapore Island at the extreme south of the peninsula.

Though an ancient city—mentioned in the *Malayan Chronicles* that were Raffles' favourite reading—once stood here, this area, as he first beheld it, was no more than a malarial swamp, its population a few hundred pirates and fishermen, the former far outnumbering the latter, and the bones of their victims littering its beaches. Raffles saw the place as it might be (and did become), and persuaded a Malay chief, ancestor of the present Johore Sultans, to rent him the island. He declared the place a free port open to all comers, and proceeded to lay down the principles of an administration firmly based on freedom and equality before the law—new words to conjure with in those parts, the significance of which quickly became manifest.

The success of this project was immediate, progressive, and lasting. In a year Singapore had 5,000 settlers, within a decade a trade worth £4,000,000., and within half a century a population equalling that of the whole remainder of the Malay Peninsula. To-day, it is the seventh largest port in the world, and, until the Japanese arrived, functioned as a hive of prosperous industry whose different racial components lived and worked in complete amity, their polyglot multitudes well governed and well looked after.

There was practically no unemployment in the municipality, and health measures initiated by British experts had practically eliminated the malarial mosquito. Escapees since the Japanese arrival report that food prices have rocketed and misery and want are now rife. The Japanese announcement that "measures are to be taken to deal with the malaria problem" is clear indication that these have been neglected since their occupation.

Penang—Travellers' Gateway

While Singapore takes the bulk of goods traffic, Penang—since the pirates became no more than a legend—has held its position as the customary travellers' gateway to Malaya by a westward approach, though occasion-

ally this would be Singapore roadstead with its breakwater of green islets, natural terminus for Pacific traffic of all kinds. At Penang, landfall will be made, usually in the early morning, so that if, assuming you to be the traveller, you have been wise enough to pack overnight everything but your sponge-bag, dawn, as she lifts her gauze curtains one by one, should find you watchful on deck, absorbing the panorama of mountain, sea, and palm-fronded shore gradually unfolded for you on either hand.

To the north, Kedah Peak rises sheer for 4,000 feet from the misty levels. Eastwards, half as high again, looms Gunong Bintang's mighty mass, and arrayed beyond it, along the land's vast granitic background, stretch a row of brother giants. Across the sound, lights may be twinkling still high up on the crag. Peering overboard, your eye detects, emerging from the mist, certain ghostly objects which skate towards you over the glassy, mysterious tide like large, inquisitive water-beetles. These are sampans. A hail floats up from one right below your feet, eerie, hardly human. It is your lascar "serang" on the lower deck who answers. That contact breaks the spell.

There are worse ways of seeing Malaya than from a railway carriage window. If you want to, you can get into the train at Prai, which is the mainland terminus opposite Penang, and stay in it till it runs right into the new station at Singapore, over the mile-long causeway linking the island with Johore. To make the whole 500 miles' trip in daylight only means tumbling out for a night at Kuala Lumpur.

Cliffs Capped by Forests

Blue-green trees in the foreground, their trunks mossy with epiphytes almost to the roots; blue-green mountains on the horizon, rolling, hump-backed, and wooded for the most part, with the sharper apex of some rocky peak soaring here and there far above the tree-line; between the granite ranges, the queerest cubes and chunks of limestone jutting from the levels, terrestrial islands of perpendicular cliff, 2,000 feet high sometimes, capped with high-grown forest that looks as inaccessible as Jack's beanstalk kingdom, though usually some rift or break-away in the rock makes them climbable—such will be your abiding memory of the Malayan scene.

There are rivers, if you could only see them, the Pahang and Perak, streams bigger than the Thames, both with a host of tributaries not yet fully mapped. "Children" of the parent river, the Malays call them, who from their earliest settlement have propped their stilted "kampongs" beside the jungle

Penang, "Gateway to Malaya"—the roadstead viewed from the crag funicular railway.

Malayan hydraulic tin mine. "Working like ants, Chinese labourers have literally moved mountains particle by particle."

waterways. Till the British came, and notwithstanding the rapids, these were the only roads they knew, but the present generation is completely railway-minded and will take the train anywhere on the slightest excuse. With their horizons thus widened, they are better citizens than were their fathers.

The predominant note in Malayan foliage is blue, though some indigenous trees at the change of leaf put forth that true green which is Nature's great rarity. Bright reds and coppers, however, give variety in the crown of verdure, as does the "wintering" rubber in cultivated zones. When its leaves change colour, the planter knows the latex flow is slackening.

To obtain a proper idea of Malayan forest scenery you have to view it by boat from one of the larger rivers, from rare clearings on the high hills, or, best of all, to fly over it, as this writer had the good luck to do with the first airborne craft in Malaya, gazing down from the cockpit of his tiny Caudron at Selangor's verdant "bukits" and seeing them like green sponges in some marine aquarium.

Vast Acres of Rubber

Afoot in the forest, you must keep to existing jungle paths or get your Malays to hack one for you as you go with their "parangs", and in either case your view is extraordinarily limited. But the land is not all jungle by any means. West of the main range, rising to 7,000 feet in places but mostly about half that height, there is much well developed agriculture. First and foremost, there are three million acres of rubber, a single product which provided in one generation, in the form of State revenues (nearly all expended at once on public works and services), the means for raising the standard of living among all domiciled communities (and notably among the poorest) to a degree not approached in any other dependency of the Crown.

Rubber trees in regimented mass formation are certainly not beautiful; but coconuts, whose waving fronds fringe miles of the coast-line, are decorative enough when displayed in that situation, where they thrive better than if planted inland, and, in the northern states and round about Malacca, the vivid green of rice-fields is truly a sight for sore eyes.

Malaya has some five thousand floral species, of which a solid third (a greater number than that provided by all British India and Burma) are real trees—a high

Malayan "secondary" jungle. "You must keep to existing paths or get your Malays to hack one as you go with their 'parangs'."

Coconuts are grown along the east coast road in Penang. Part of the harvest (split in readiness for the coir lining to be separated from the copra, edible part of the nut) is shown piled against the villagers' "atap" huts.

average. What is even more remarkable, half these species are indigenous to this relatively tiny corner of Asia. The Dipterocarps, a typically Indo-Malayan group family, furnish most of the larger growths. The universal epiphytes include not only orchids, aroids, and ferns of the most varied outline and dimensions, but woody parasitic species comprising creeping rhododendrons and the typically Malayan "rotans", climbing plants whose rope-like stems are everywhere festooned, grappled to branch and trunk by leaves whose prolonged tips are armed with wickedly barbed spines.

Parasitic figs display their characteristic leaf patterns. Almost ubiquitous, and toughest obstacle of all to your passage, are the spiny clumps of "bertram", a low-growing palm. The erect and more graceful genera of palms exist in many forms but are less in evidence. Tree-ferns abound at higher altitudes, and, in some districts, bamboos.

Low-growing, herbaceous plants are few, but sometimes, especially in the cool jungles like those surrounding Bukit Fraser, they occur in exceptionally beautiful forms,

though few will respond to attempts at cultivation.

Crocodiles, Crabs and Crayfish

Malaya's western coast is fringed with mangroves, rooted in mud and slime, home of the estuarine crocodile, uncouth crabs, and a bright red crayfish that looks as if it had already been boiled. The mangroves, especially the "bakau" variety, yield a valuable firewood supply. The eastern shore is belted with the rustling casuarinas, a coniferous and sand-abiding tree with quite a European look about it. Where Selangor's seaward border provides sand, at Port Dickson and Morib, the casuarina crops up again.

In the rubber country, sublime and baroque effects are alike left behind. All is dull, dank, and monotonous, though nowadays proprietors and agents have passed the stage when it was thought seemly for planters to grow rubber-trees in orderly rows right up to their own windows. Estate buildings in these days are sited to the inmates' best advantage from every point of view, so that the bungalows of European managers and their assistants nestle amid spacious compounds that are usually made to blossom like the rose, while the "coolie lines" are laid out and constructed with due consideration given to every aspect of the labourers' welfare. Each has its own hospital with up-to-date equipment and a qualified staff, its own little school for the children.

Tin-mining has scored its mark on the Malayan landscape, over thousands of acres where trial has shown the land to be stanniferous. The Kinta valley in Perak is honeycombed with mines old and new. At night, with all its activities functioning over miles of country under the glare of sizzling arc-lamps, this valley is a wonderful sight. Working like ants, Chinese labourers have literally moved mountains, particle by particle. Huge stagnant meres, 100 to 200 feet deep on occasion, mark the site of their bygone endeavours; in new areas, or those not yet exhausted, the scarred face of the earth is grotesquely patterned with the weird appliances of mining, box-pumps, sluices, aqueducts, and what not, of a crazy and gimcrack appearance, yet perfectly adapted to their intended purpose.

There are deep lode mines in Pahang where Cornish methods are followed 1,600 feet below the surface; in the alluvial areas between Kuala Lumpur and Klang, huge bucket dredges paddle back and forth in duck-ponds hardly big enough to accommodate them—or they did so till the Japanese arrived, just before which most of these extremely costly machines were "denied" them by the most drastic means available, and their replacement is going to provide the industry with a post-war problem of some magnitude.

Old Malacca—Europe's first Malayan outpost, once centre of the spice trade and richest part of the East. Sieged by Albuquerque in A.D. 1511, and captured by the Dutch in 1640, it has been British since the Napoleonic wars.

From this building, erected by the Hon. Enos Collins about 1812, he and Allison carried on a large shipping and warehouse business, and here, after the war, in 1815, Collins set up his private banking business. The banking section was occupied by The Halifax Banking Company from 1825-1903, and by The Canadian Bank of Commerce from 1903-1908.

A Story of Canadian Banking

With Regard To Foreign Trade

by C. M. SHORT

FOREIGN TRADE begins with production and is completed by finance. Obviously, there could be no trade between nations if there were no production of goods. And in the modern world both production and trade need financial service of the most effective and far-reaching character.

Over a long period before World War II Canada had developed for external trade a financial service in her banking system which was equal to any in the world. Indeed, the origin of banking in Canada may be traced directly to foreign trade. The leading merchants, many of them importers, were the bankers during the latter half of the eighteenth century and until shortly after

the war of 1812—these business men taking deposits, accepting orders for payments and granting credit to distant wholesalers. Imports invariably exceeded exports, and specie of the various kinds in circulation—West Indian, American and Latin American dollars, British guineas, French crowns, Portuguese johannes and Spanish doubloons— left the country faster than it came in, the deficit being only partly relieved by over-valuation of the currency. The exchange difficulties, and particularly the inadequate supply of specie, were among the reasons underlying the establishment of the first regular banks. These early institutions had an intimate and important connection with foreign trade. They bought and sold sterling bills to obtain specie, and these transactions, as well as other exchange dealings, made up the largest and most profitable of their activities. One of these banks, The Halifax Banking Company, was, in fact, the outgrowth of its founder's ventures in the handling of export and import goods, including those acquired through the running of war blockades and privateering, which flourished openly during the French wars.

Enos Collins, a native of Liverpool, Nova Scotia, had been engaged in the campaign of reprisals upon the French ships that waged war on the merchant vessels of Nova Scotia. As a young first lieutenant of a privateer he participated in a daring raid that netted four Spanish prizes. As an older man Collins was no longer an active participant in such stirring expeditions, but the financier and manager of them. Not only in the Maritime Provinces but throughout all New England, he was looked upon as one of the great capitalists of the time. At his docks privateers were fitted out and cleared for their sanguinary voyages along the Atlantic Coast and the Spanish Main, and into his warehouse came the spoils of their rich prizes—brandy and silk and spices. Alongside these were stored rum and sugar from the Nova Scotia schooners plying in the West Indian trade, enabled by the vigilant British Navy to elude the enemy war vessels, and stores and munitions brought by British packets for the Halifax garrison and fleet. Indeed, most of the war activities of the province and a large part of its merchant shipping were connected with the building which was, a few years later, to prove the birthplace of its first bank.

The first-growth oak, hard pine and birch from the American colonies gave England the wooden walls which saved her in the long and desperate struggle with the despotic seeker after world domination of that day. For more than a century—from 1761 to 1874—the demand for ships built in Nova Scotia could scarcely be met, and under the stimulus of the wastage of bottoms caused by the wars, and of the bounty of ten shillings per ton granted by the legislature in 1785 on provincial vessels measuring over forty tons, the industry grew until ships from the yards of Pictou, Windsor, Yarmouth, and Liverpool were sailing every sea. For almost all that hundred years shipbuilding constituted the one outstanding and robust in-

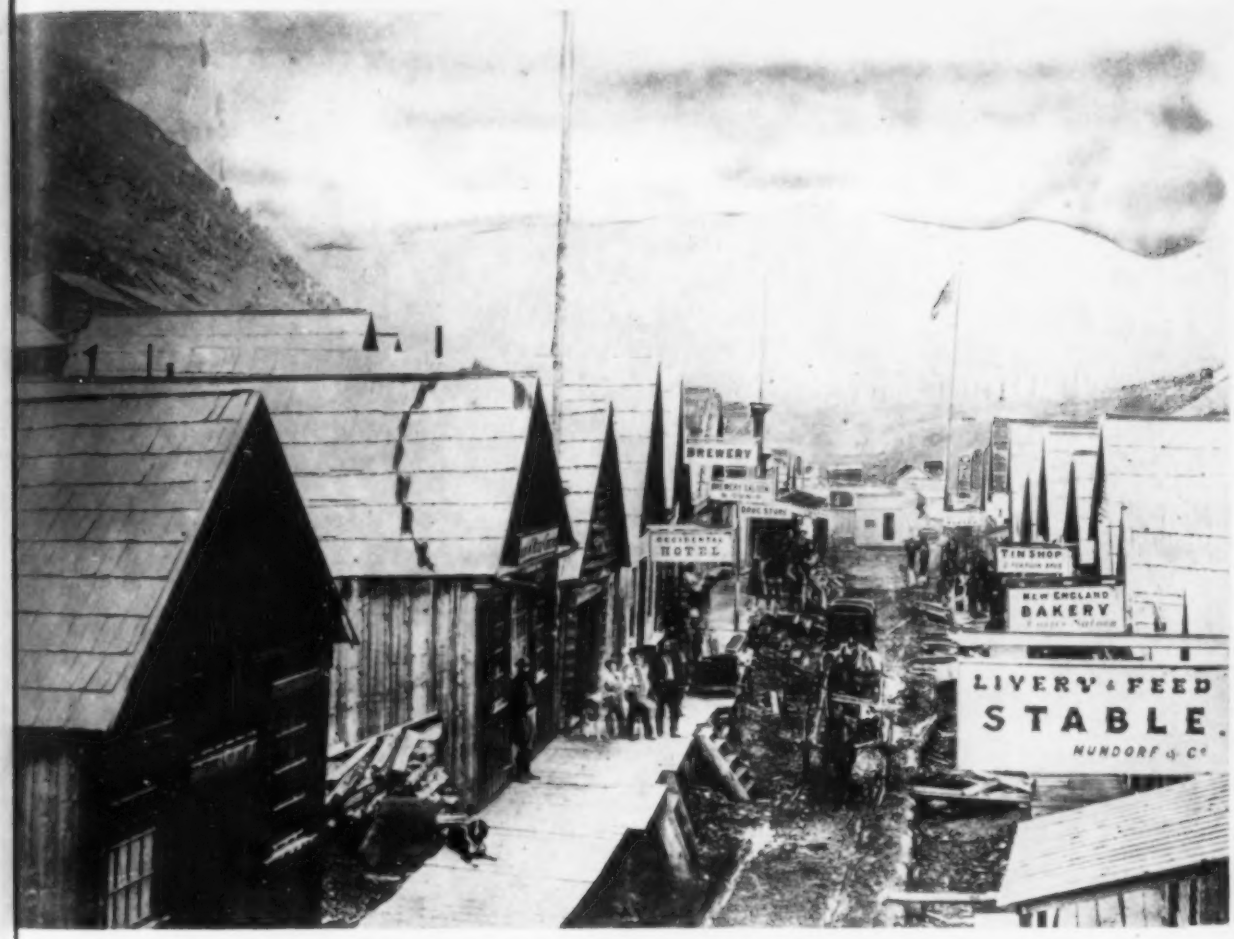
Enos Collins, founder of The Halifax Banking Company

dustry of the province, and there was little business which did not depend upon it.

Merchants, vessel-owners, shipbuilders, and even the public authorities, were subjected on the one hand to the inconvenience and hazard of having either to keep their spare funds idle or to entrust them to some private individual at an uncertain rate of interest, and, on the other, to the difficulties of borrowing money from individual lenders, after troublesome negotiations with each. There was no machinery by which the funds of the community could be concentrated for particular undertakings. The amount of capital which might be borrowed for any Halifax enterprise was, as a rule, limited to the sum which one lender was willing and able to advance. Every merchant had a bank in his own office in the form of a heavily barred and rivetted iron chest. A sea captain, just home from a cruise, leading a small procession of sailors carrying bags of treasure, flanked by a guard armed with stout cudgels or cutlasses, was no uncommon sight on Water Street in those days, and, as often as not, these little bands turned into the stone warehouse at the head of Collins' wharf. There Enos Collins and his partner, Joseph Allison, continued to be important factors in the trade of the port, even after the lucrative opportunities of the French and American wars had vanished. The preceding years of adventure had left the firm not only vastly enriched, but occupying a high place in the commercial world because of its daring exploits. It was these men who had been most successful in running the French blockade with shipments of flour and provisions for the support of Wellington's army in the peninsula, and in eluding the French fleet a second time with their return cargoes, thus securing double profits.

When peace came in 1815, Enos Collins recognized that the day of war prosperity was past, and quickly turned to making private loans as an investment for his surplus capital. Before the dockyards were moved to Bermuda, when Halifax still had one hundred and six ships "on the station", the banker-merchant would discount the bills of the naval officers for a consideration, or would provide the funds to load a ship for the West Indies, or to bring a cargo from China, or to complete a schooner on the ways at Digby. His ear was always cocked for the price of doubloons at Boston, and he was a shrewd dealer in exchange to

General view of Government Street, Victoria, British Columbia, in 1867



Barkerville, Cariboo; The Bank of British Columbia is just behind the dog in foreground—almost directly opposite the New England Bakery.

more than ordinary advantage, because, large as were his resources in the province, they were at least duplicated by his wealth in the United States. For years he and his partner worked together as ship-brokers and forwarders at one end of the building and as private bankers at the other. With the decline of trade and the scarcity of capital in Halifax, the banking department of the business grew in relative importance, and the centre of the firm's activities moved gradually farther from the docks, and nearer to the Water Street front of the warehouse. It was a most natural evolution that a plan for a separate banking business should then take form, and early in 1825 application was made to the legislature for a charter.

The Halifax Banking Company was established as a private institution in which Collins had as partners several outstanding Haligonians, including Samuel Cunard, who was to become world famous as a pioneer in ocean steam navigation and as the founder of the Cunard Line. Collins was the dominant figure in the bank until his retirement, due to advanced age, in 1859, but his faith, honesty and sagacity were interwoven in the fabric of Canadian banking and foreign trade. As one example of his faith, there is an authenticated anecdote that, shortly before his death in 1871 at the age of 97, he had an interview with a good tenant and renewed his lease for twenty years, with the injunction to come to him again personally at the expiration of that time and he would renew the lease again on favourable terms! Another example of his faith was, of course, the bank he founded and helped to guide through part of its long and distinguished career. It was merged with The Canadian Bank of

Commerce in 1903, and its traditions and trade connections then extended into the national sphere of finance.

Midway in the career of The Halifax Banking Company another outstanding example of the influence upon banking of enterprise and of international commerce occurred in the establishment of The Bank of British Columbia. The history of this bank throughout its long life reflects the development of the Pacific Coast, sharing alike in the vivid life and colour of the days of gold rushes and land booms. The founding of the bank was due to the working of three factors: the gold discoveries on the Fraser River and especially in the Cariboo country; the abundance of capital seeking investment in London; and the success of recent ventures in banking, both in England and abroad.

When the Oregon Treaty had assigned to the United States all the Pacific Coast south of latitude forty-nine, most men in England concluded that nothing was left to Britain but another Labrador or Tierra del Fuego—"a territory", as it was described by a Chancellor of the Exchequer, "bounded by frost and banked by fog; woe betide any unfortunate individual who might be so far diverted from the path of Providence as to settle in these parts". It needed the lure of gold to attract attention to the far-off colony—the lure that so often had led men to discover the more enduring riches of lands that otherwise would have lain untouched for many a year. Three times in a dozen years—California in 1847, Australia in 1851, British Columbia in 1858—the lands bordering the Pacific had startled the world by discoveries of gold which vastly increased the world's yearly output.

The stampede to the placer diggings of the Fraser in 1858 has rarely been paralleled. From San Francisco tens of thousands of the men who had drawn blanks, or the lesser prizes, in California's lottery, streamed north. They wakened the sleepy little village of Victoria to feverish activity, hastened across the straits to the Fraser in all manner of craft, from the Hudson's Bay Company's steamers to crudely fashioned skiffs, and scrambled for claims on the bars and benches of the golden river. The water was too high to permit of much working, travel was difficult and living dear; in a few months all but three or four thousand had shaken the dust of the colony off their feet. Of those who stayed, a few found riches in the lower Fraser; others, convinced by the fineness of the gold that it came from richer deposits upstream, struggled through river rapids and forested hills, hastily prospecting every stream that flowed into the Thompson or the Fraser, and finding gold in almost all, until, in 1861, the advance guard reached Williams and Lightning Creeks in the Cariboo country, and sent back word that the richest placer deposits in mining history had been discovered. The news of the gold discoveries came at the right conjuncture. In London, at this time, capital was going begging for investment. "In Lombard Street, money is a drug", was the summary of a financial journal in the spring of that year. There was also a call from the colony of British Columbia itself for the services of a bank. Writing to the Secretary of State for the Colonies about this time, the Governor, James Douglas, said: "Much anxiety has been expressed by the miners generally upon the subject of banks of deposit, which are greatly in need in every district of British Columbia, the miner's only alternative at present being to bury his gold dust for security, which is known to be the general practice in Fraser's river; but were banks of deposit established, they would willingly pay a monthly percentage on any sums they might deposit. I have long been convinced of the value and importance of such institutions, but without the assistance of men of tried integrity and business habits, no such scheme could be carried out with advantage to individuals or to the public."

This combination of circumstances led a group of London bankers and merchants, some of whom had interests on Vancouver Island, to organize The Bank of

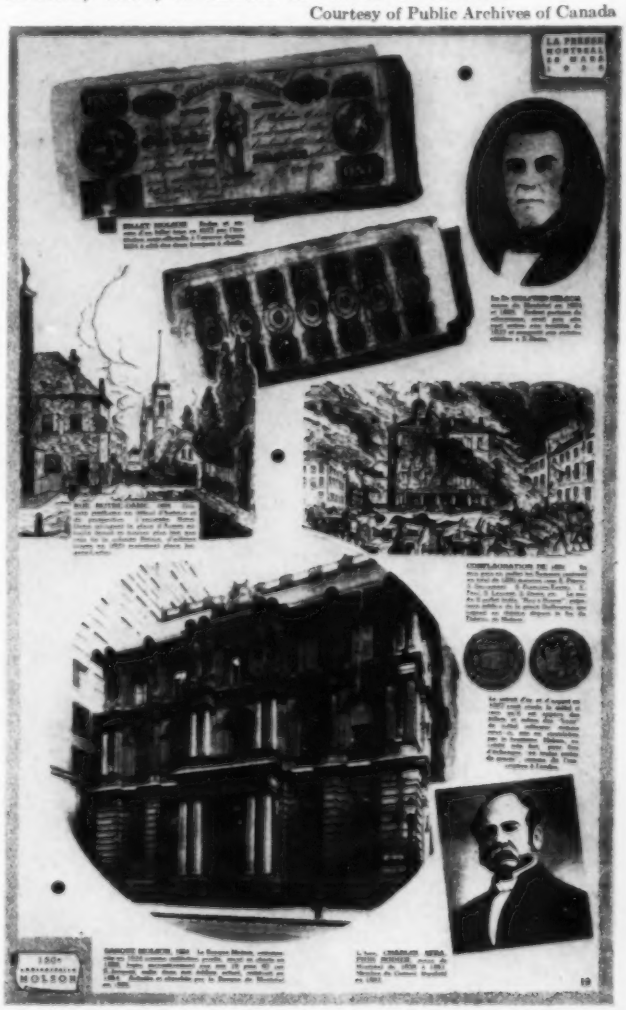
British Columbia in 1862. This institution had a memorable career of about forty years, not only throughout the Cariboo gold-fields but, also, along the Pacific Coast. Its Canadian head office was in Victoria, but it had branches in the other seaports of Vancouver, New Westminster, Seattle, Portland, Oregon, and San Francisco, at all of which the bank transacted foreign trade of large proportions. Amalgamated with The Canadian Bank of Commerce in 1901, it left its mark on Canadian banking, for it made other institutions mining-conscious and increased their interest in foreign trade.

Banking service for export and import trade developed as Canada progressed economically. By the time the first World War broke out, this Canadian service was one of the most efficient to be found anywhere, capable of meeting not only all domestic requirements but, also, some of those of other countries. Thus Canadian bank representatives in the United States handled at one time a substantial part of the cotton export bills of that country, as well as transactions for shipments of canned fish, fruit and lumber from the American Pacific Coast. During the Spanish-American War a Canadian bank arranged through its correspondents for the payment of American soldiers in the Phillipines. In the 1914-18 conflict this institution was the agent for the British Government's bullion brokers responsible for buying and shipping vast quantities of American silver to India.

But banking service has been built up primarily for Canadian requirements, and it acts the whole year through, across the Dominion, at times when some of the other agencies are seasonally inactive. Bank credit is available even before seed of export grain is in the soil each spring, for farmers borrow to meet pre-season expenses, again to provide for planting operations and, finally, to pay for harvest help. But that is not the end of grain financing. After the farmers' needs are satisfied bank credit is furnished to the elevator companies and other agencies who buy the farmers' grain; then it is available, in turn, to traders, millers and exporters. This revolving credit fund ranges from 75 million dollars per year to 200 millions, the amount required depending, of course, upon the size of the crops and the scale of grain prices. Over half of the amount used each year is for export trade. But the same facilities are available for all forms of production and are utilized by all exporters. Thus bank credit is used by loggers to cut timber for lumber, pulp and paper mills; by the wood manufacturers to turn their raw material into the products required in foreign markets; and to facilitate the export of surpluses over and above domestic needs. Bank credit is used also in the mining areas, in which are produced many of Canada's most valuable exports and into which the banks have followed closely upon the heels of prospectors.

Page from La Presse *of Montreal, March 1936—recording Molson's 150th Anniversary. Banque Molson, 1864, is shown in circle at bottom.*

Courtesy of Public Archives of Canada



Credit in the form of loans is, however, only one part of banking facilities for external trade. Bills of exchange, representing export shipments and discounted by the banks, as most of them are, may also be regarded as credit. And the redemption of these bills is a most important element in export trade, for without it Canadian products shipped abroad might not be paid for—if, indeed, they would even be shipped unless redemption were assured. An exporter may consider himself freed, except in a legal sense, of further responsibility for a shipment of goods once he has arranged for sale and delivery, covered himself by insurance, and discounted his bill of exchange with his banker. But it remains for the banker to collect the money due for the shipment in any country to which the goods may be consigned, anywhere in the accessible world. Export trade does not end, therefore, until the banks obtain payment for it, a process effected through the banks' branches abroad or through foreign banking correspondents, associates who have been carefully selected, and whose services have been cultivated for many years in the interest of the foreign trade of Canada.

Many bills of exchange negotiated with Canadian banks are drawn under Letters of Credit established with these institutions by their foreign correspondents. This form of bank credit, though originating outside Canada, is availed of within the Canadian banking system, which assumes the responsibility of seeing that certain conditions, such as the provision of proper documents (bills of lading, certificates of insurance, invoices, etc.), of export transactions are fulfilled. And foreign branches and old, time-tested associations with foreign institutions enable Canadian banks to establish Letters of Credit outside Canada which facilitate imports of essential goods into this country. In effect, an importer whose credit is good in Canada can have it made good by Letters of Credit wherever he can trade.

Foreign trade under unstable exchange conditions is risky unless exporters and importers can protect themselves against foreign exchange fluctuations. But the risk of loss from such fluctuations can practically be avoided by forward exchange contracts arranged through banks which, provided that firm sales or purchases of goods abroad are effected, will undertake to provide or buy stated amounts of exchange within reasonable periods of time, according to official regulations.

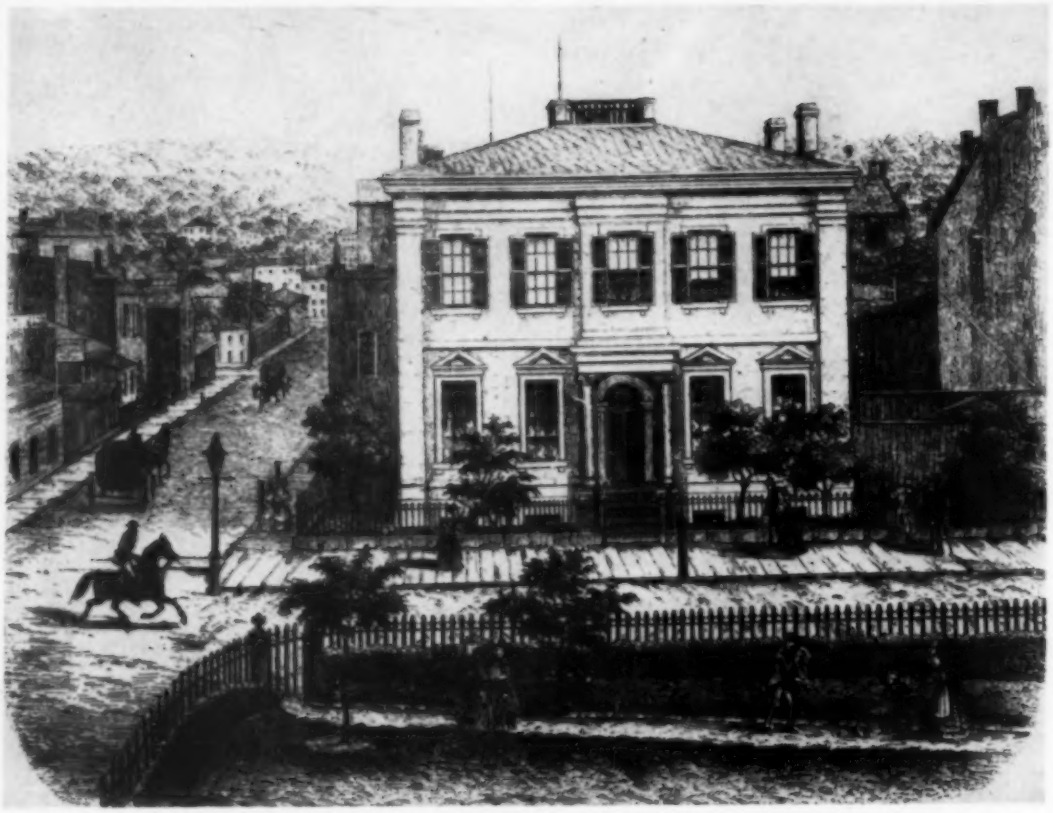
Supplemental to all these services afforded by our banks, but of not inconsiderable value in themselves, are the facilities these institutions have, and which they make available to all foreign traders, for obtaining reports on the standing of exporters and importers abroad, for bringing them into contact with Canadian sources of supplies and buyers, and for advising on economic conditions, prices and many other factors which enter into sound, progressive commerce.

All these banking services are available at any branch bank, though reference to central foreign trade departments at large centres may be necessary for the most important or complicated transactions. These departments function so expeditiously, however, that no undue delay will be found in transactions referred to them. They are, in fact, highly specialized bureaux, operating mainly through the 3,000 bank branches across Canada which may be regarded as not only general banking offices but, also, as representatives of foreign trade.

All these services, too, have continued in operation during the war, although, of course, they have had to conform to the official foreign trade and exchange controls. But these services have been utilized extensively in the conduct of a rapidly expanding foreign trade, one that rose to a value of about $5,250,000,000 in 1944 (exports of nearly $3,500,000,000 and imports of $1,750,000,000).

Rising standards of living, economic security, and high employment are to be achieved in post-war Canada only if she can progress a long way beyond the relatively narrow limits that war has imposed upon her commercial foreign trade. In normal

Three currency notes of The Halifax Banking Company



The Gore Bank, Hamilton, Ontario—as depicted in **Canadian Illustrated News,** *1871.*

Courtesy of Public Archives of Canada

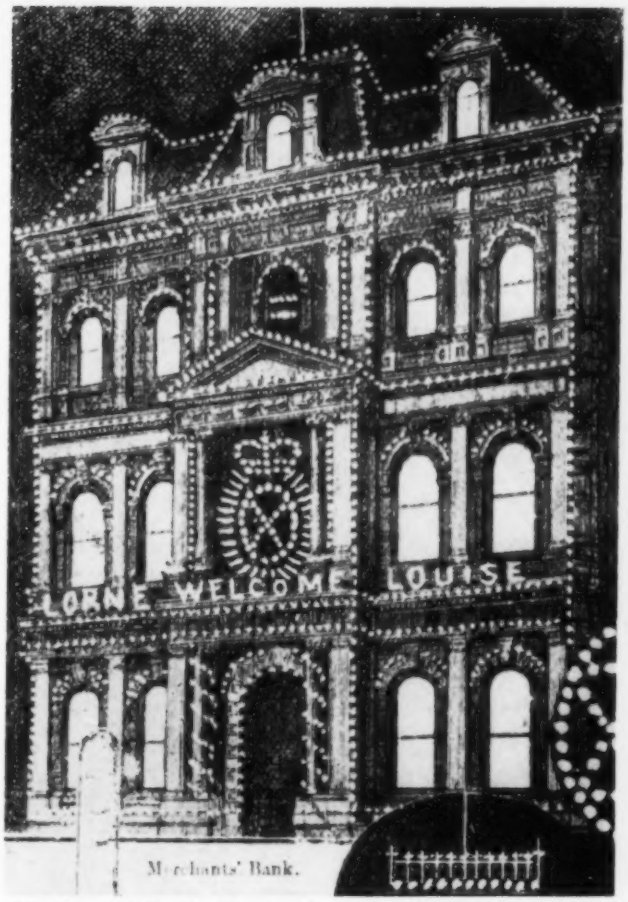
times, Canada, as has been emphasized and re-emphasized of late, derives almost one-third of her national income from export trade. That, however, is only part of the picture. Another is that while Canada *might* live without export trade, she certainly would live in a rather primitive condition if she could not sell abroad enough of her surplus production to obtain from other countries the vast quantities of non-indigenous commodities—cotton, for example—which she needs to make life here comfortable. Canada is, in fact, one of the least self-sufficient, therefore one of the most import-dependent, countries, and, of course, her capacity to *import* is determined by her capacity to *export*. A large Canadian surplus production of various commodities is necessary to meet a substantial national deficit in many other commodities. At the end of this war Canada will have an export capacity of commercial goods about one-third greater than that of 1939, and a cor-

Dominion Bank, Toronto—**Canadian Illustrated News,** *1879*

Courtesy of Public Archives of Canada

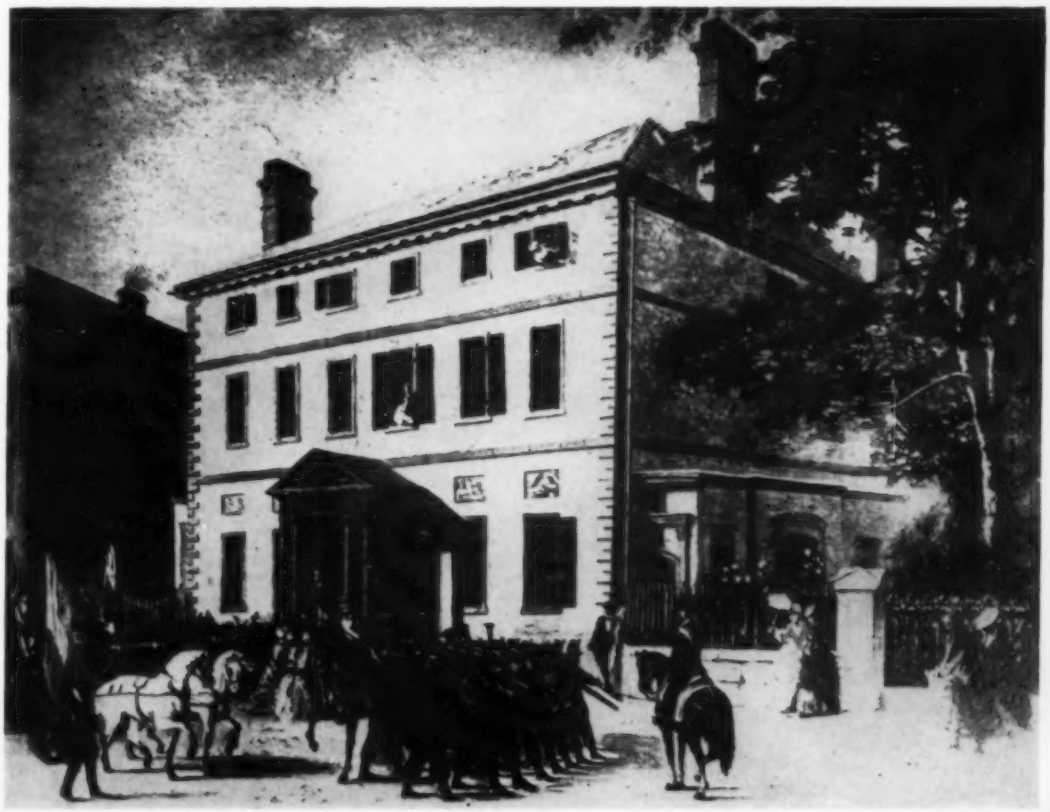
responding increase, of course, in her capacity to import.

She will also have additional complementary services—an enlarged Department of Trade and Commerce, more commercial representatives abroad, and export credit facilities, as well as all the new skills, manual, scientific and financial, acquired in producing and dealing in a greater variety of goods than has ever previously come from Canadian resources. There will also be available old, highly-developed services—commodity exchanges, transcontinental and transoceanic transportation and banking systems—that did much in the past to make Canada one of the leading nations in world commerce, and that can be of great aid in reconverting her foreign trade to a peacetime basis and in expanding it so as to utilize fully all the great resources at her command. The Canadian banking system, with its long experience, specialized facilities and extensive connections at home and abroad, will be in the vanguard of all these services, financing production and distribution from the beginning to the end of foreign trade.



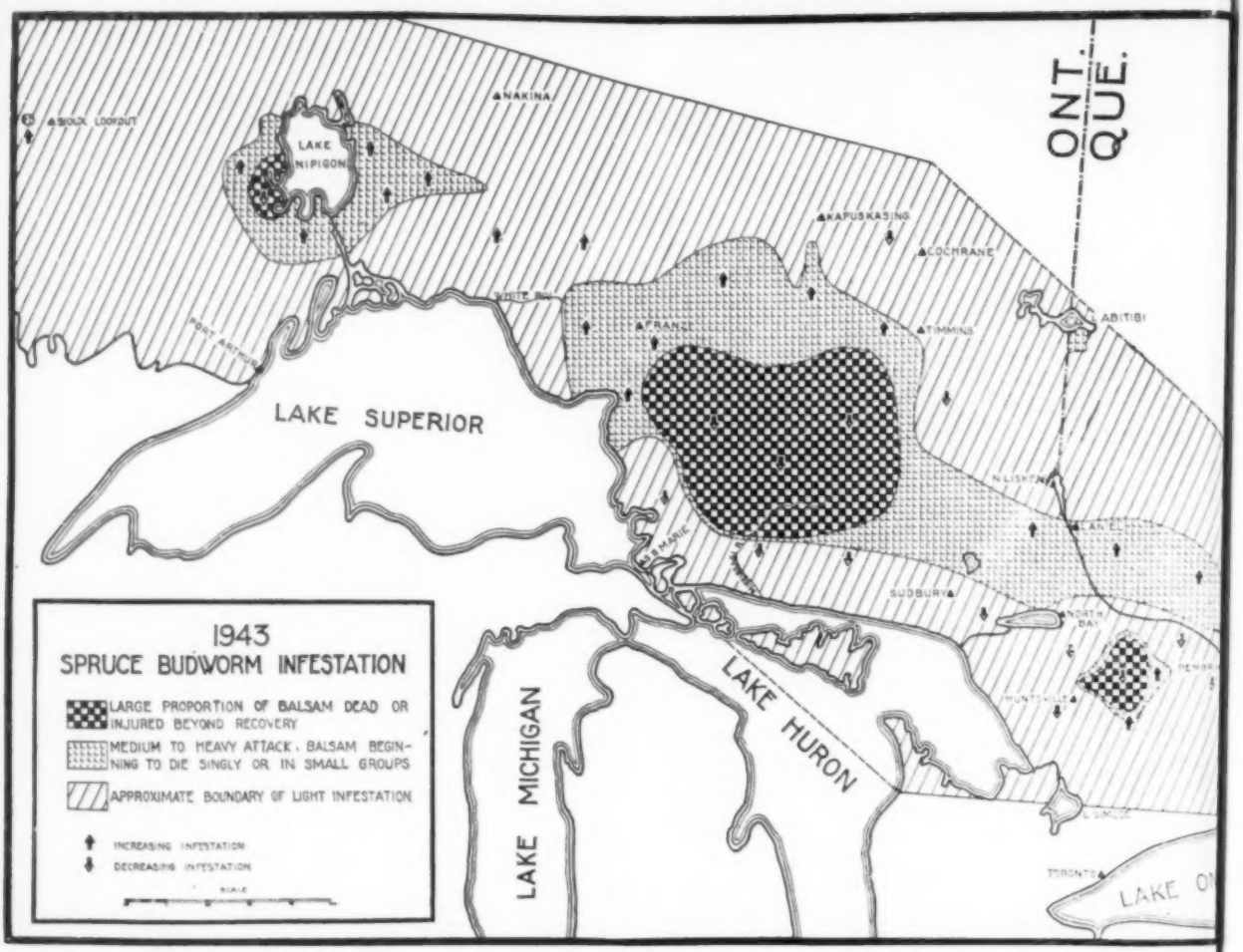
Merchants' Bank, Montreal—gaily bedecked to celebrate a visit of the Marquis of Lorne (Governor-General of Canada from 1878-'83) and Princess Louise.

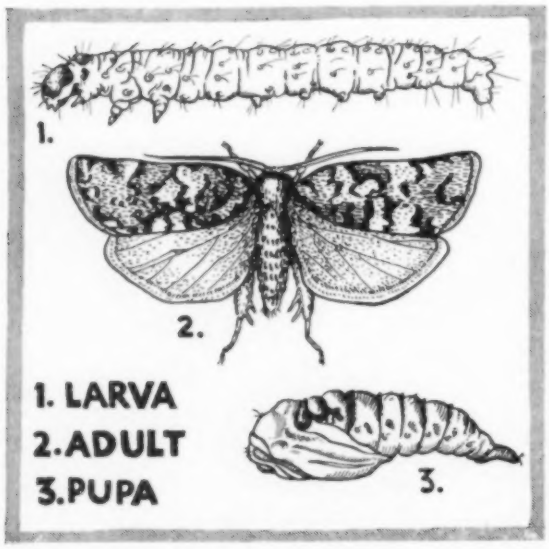
Courtesy of Public Archives of Canada



St. Jean Baptiste Society procession, 1872, in front of the old Bank of Montreal Building—later occupied by the Parque du Peuple

Courtesy of Public Archives of Canada





The worst areas of budworm infestation in Ontario are indicated on this graphic map.
Courtesy Dominion Entomological Bureau

The larval, adult and pupal stages in the life of the destructive spruce budworm are here shown many times enlarged. The colour of the adult moth varies from a dull grey-brown to a warm russet tone.

DDT in Ontario's Forests

by A. P. LESLIE*

THE "rediscovery", in recent years, of the miraculous insecticide, DDT, holds out hope that man may be able to control effectively some of his most widespread and destructive enemies. It is commonly known that insects cause inestimable damage to life and property every year. Fruit, wood, books, grain, clothing, the human body—nothing seems to be immune to their attack. Entomologists have worried and worked for years over a means of hampering or, if necessary, destroying insects damaging to man's welfare. Of all the discoveries so far, DDT now offers the greatest reason for optimism.

Already DDT (*dichloro-diphenyl-trichloro-ethane*) has successfully attacked fatal disease-carrying insects in Europe and the Pacific. Used by the United States Army, it has proved itself effective against the rickettsia-carrying louse, which thrives in the filth and destruction of war. Mosquitoes, carriers of malaria, filariasis and other sicknesses, have been reduced greatly in number on tropical islands by the frequent use of DDT sprays and dustings. It has made life for the soldier on insect-infested islands of the tropics a lot more comfortable and incomparably safer.

DDT is still in its infant stage as far as our knowledge of its total uses and value is concerned. We have yet to arrive at the fair estimate of its potential which only many experiments over a long period of time will bring. Its initial successes have naturally led the public, in general, to hail it as an answer to all of man's insect problems; but it is far too early to arrive at such extreme conclusions. One thing, however, is certain; though DDT cannot be rated the answer to all the entomologists' prayers, it may well prove the answer to some insect-infestation problems that have plagued the world's foresters over a long period of years. In Ontario, the possibilities of DDT for crippling the inroads of timber-destroying insects are already being explored in a pioneer manner.

Before dealing with DDT as it relates directly to forestry, it might be well to introduce the reader briefly to the history and nature of this powerful insecticide.

DDT is not, contrary to general impressions, a new discovery. It was first formulated more than seventy years ago, in 1874, by a German chemist named Zeidler, who combined chloral hydrate, monochlorbenzene and sulphuric acid. However, Zeidler never put his formula to use, and it was purchased after his death by the Basle, Switzerland, chemical house of R. Geigy, who hoped that it might prove an effective moth-proofing material for treating fabrics and dyes. As an insecticide, DDT continued to lie dormant until 1937, when it was tried out as a counter-agent against the newly-arrived Colorado potato beetles, which were quickly ravishing the none-too-plentiful Swiss potato fields. Its initial success in saving these crops led to further tests of its effectiveness as an insecticide and to its present major role of man's ally against destructive six-legged creatures.

In appearance, DDT is a waxy substance, usually prepared, for ease of solution, in the form of flakes or grains. It has a distinctive penetrating, though not strong or unpleasant, odour. DDT is relatively insoluble in water, and only sparingly so in kerosene and fuel oil, but usually forms a solution readily when immersed in the various methylated benzenes and napthalenes. Combined with DDT, most benzenes and napthalenes act as synergists in increasing the killing effectiveness of DDT. Following the making of the DDT-benzene or DDT-napthalene solution, the usual procedure is to thin the solution down with coal oil or diesel fuel.

For certain uses, it has been found desirable to have a mixed preparation of DDT

* A. P. Leslie (B.Sc.F., University of Toronto), a member of the Research Division of the Ontario Department of Lands and Forests, has drawn extensively upon departmental bulletins in preparing this article.

Right:—Royal Canadian Air Force truck used to convey DDT solution from oil-tank cars to airport.

Left:—View of Imperial Oil tank cars which conveyed DDT solution. Note protective masks and goggles worn by overalled men on platform.

Below:—Crew lined up before Canso aircraft prior to early-morning operational take-off. All aircraft were outfitted with special DDT spraying devices.

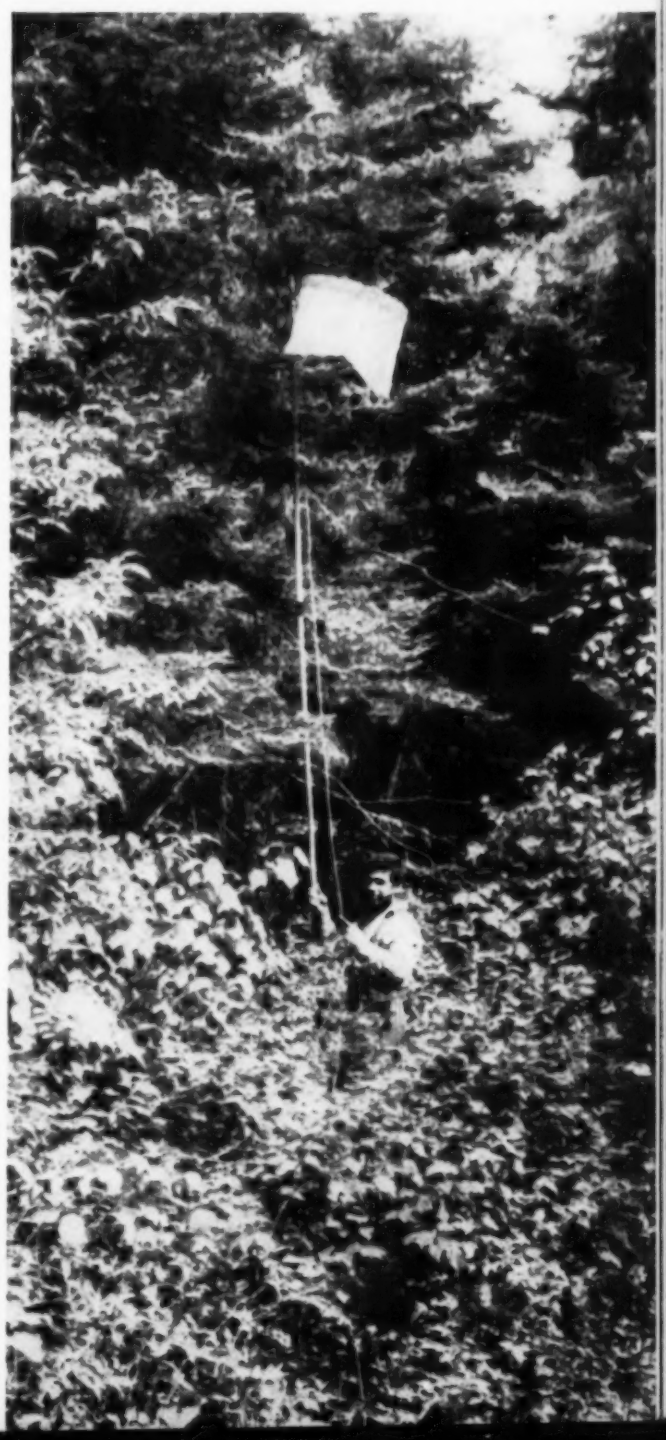
and water; the insecticide is, therefore, now being prepared for use with water by means of an emulsion. In addition to its use as an element in fluid solution, DDT is now also being made up, in mixture with some inert non-caking substance, for use as a powder-dust.

After a DDT solution is sprayed, it leaves small crystallized particles of pure DDT on the areas treated. Any insect (liable to its lethal effects) which crawls over the area thus treated is attacked as soon as it picks up some of the powder upon its body. DDT, however, does not necessarily have immediate effect, and its lethal power is less instantaneous than that of some other insecticides. It attacks the nerves of its victims, and insects under observation first begin to twitch, then lose control of their limbs, and finally die in a convulsion. Some insects, particularly beetles in adult form, are little affected by DDT spray in its usual concentration, but most flies and mosquitoes and nearly all forms of larvae are readily susceptible.

Because of its insolubility in water, DDT is not washed away by rain, and retains its effectiveness for weeks. It has proved useful, when applied as a wall-coating, in insect-proofing the walls of buildings for considerable periods of time.

Discriminately used, DDT should become a potent means of improving man's welfare, but there is a very strong case against its indiscriminate use. *DDT may create as much harm as it can good unless used by those in possession of full available knowledge of its characteristics.* Doctors of the United States Public Health Service have already pointed out that DDT may be a hazard to human health, and that it should be used with considerable care. Since DDT has no warning colour or taste, and its toxic effect can be cumulative as well as spontaneous (small doses over a period of time can have the same result as a single large dose), its menace may be particularly insidious.

Apart from any possible dangers it may have for mankind, DDT definitely possesses potential harm for many useful forms of insect, bird and animal life. Some fish, for example, are known to be liable to its noxious effects; the valuable pollinating honey-bee also is affected by it. Butterflies and other beautiful and useful forms of wild life might become innocent victims if DDT



Gathering of insect specimens after completion of operation—to assist in making tentative estimate of experimental attack's results.

Map of Nipigon area; two large blocks, over which large-scale DDT experiments in Ontario were made, are heavily outlined. This area contains one of the worst budworm infestations in Canada.

were used in a wholesale fashion without premeditation and experiment. For, of all the 625,000 and more species of insects known to us, only a very small percentage is known to be injurious in any way to man or his possessions. Entomologists, aware of this, are studying the reactions of all forms of animal life to DDT before they commit themselves to any widespread use of it.

Entomologists, however, are not averse to putting DDT to use where they are sure it will attack insects known to be definitely injurious, and where there exists a very considerable "margin for error". Such a case is to be found in the spruce budworm situation in Ontario. The spruce budworm is a particularly obnoxious little pest which has been eating away the balsam stands of Ontario on a very destructive scale. It is an enemy of the forester in particular, and of the people in general. The Ontario Department of Lands and Forests, since it represents both the forester and the public, has strong reasons for resenting the inroads of this insect pest.

The spruce budworm is by no means easy to keep under control. At the present time, it is attacking wide forest areas in both Ontario and Quebec. The Department, working in co-operation with the Dominion Entomological Service, was one of the first organized bodies to appreciate fully the threat which the budworm held for the forests of Canada. As soon as it could obtain the necessary funds and trained research staff, it undertook to meet that threat with a double-edged programme planned (a) to study the life history of the budworm in minutest detail, and (b) to develop practical control measures.

The first part of the programme—that of studying the spruce budworm—was, of necessity, mainly left to the staff of the Dominion Entomological Service, which had already compiled a great deal of information on this and other destructive insects and was in possession of the staff and background necessary for the work. The Province, however, works in the closest collaboration with the Dominion, and a large laboratory of the most modern type has been erected at Sault Ste. Marie at the expense of the Ontario Department of Lands and Forests for use by dominion entomologists.

The second platform of the anti-budworm programme—the study of control methods—is largely being carried out by, and at the expense of, Ontario's Department of Lands and Forests. The Department has taken the initiative throughout the experimental control campaign, enlisting the assistance of the United States Department of Agriculture, experts of the University of Toronto, and the Dominion Entomological Service.

The spruce budworm itself is one of the most misnamed of insects; it is *not* a true worm, and its main interest is *not* spruce but balsam. It will attack red and white spruce, and even other species, once an infestation is well under way, but this fact is hardly sufficient to justify the misnomer. The so-called spruce budworm is the larva of a small brownish or greyish moth with a wing-spread

DDT tank cars on railway siding

of about seven-eighths of an inch. At a distance, the parent-moth is not unlike the common clothes variety, and looks far too modest a creature to be the parent of so much widespread destruction.

All the damage to the forest is done while the spruce budworm is in the larval stage—corresponding with the period of new tree-growth in the spring until about the first of July. The life cycle of this insect begins early in July when the parent-moths emerge from their cocoons and lay their eggs. After a very short interval, the eggs hatch, and the tiny, immature larvae wander about, more or less harmlessly, seeking suitable locations in which to spin their winter cocoons. They remain, comfortably asleep in their tiny silken homes, until early spring, when, emerging as fully-grown caterpillars, they launch their campaign of destruction. After consuming any old balsam and spruce needles available, they attack the sprouting buds of new growth, and, in two to five years, leave tree after tree behind them, stripped and dying. These armies of mature larvae can defoliate a forest area in an amazingly short period. The destructive annual feeding continues for from three to five weeks, after which the budworms enter the pupal stage, emerging, in early July, to start yet another generation on its path of despoliation.

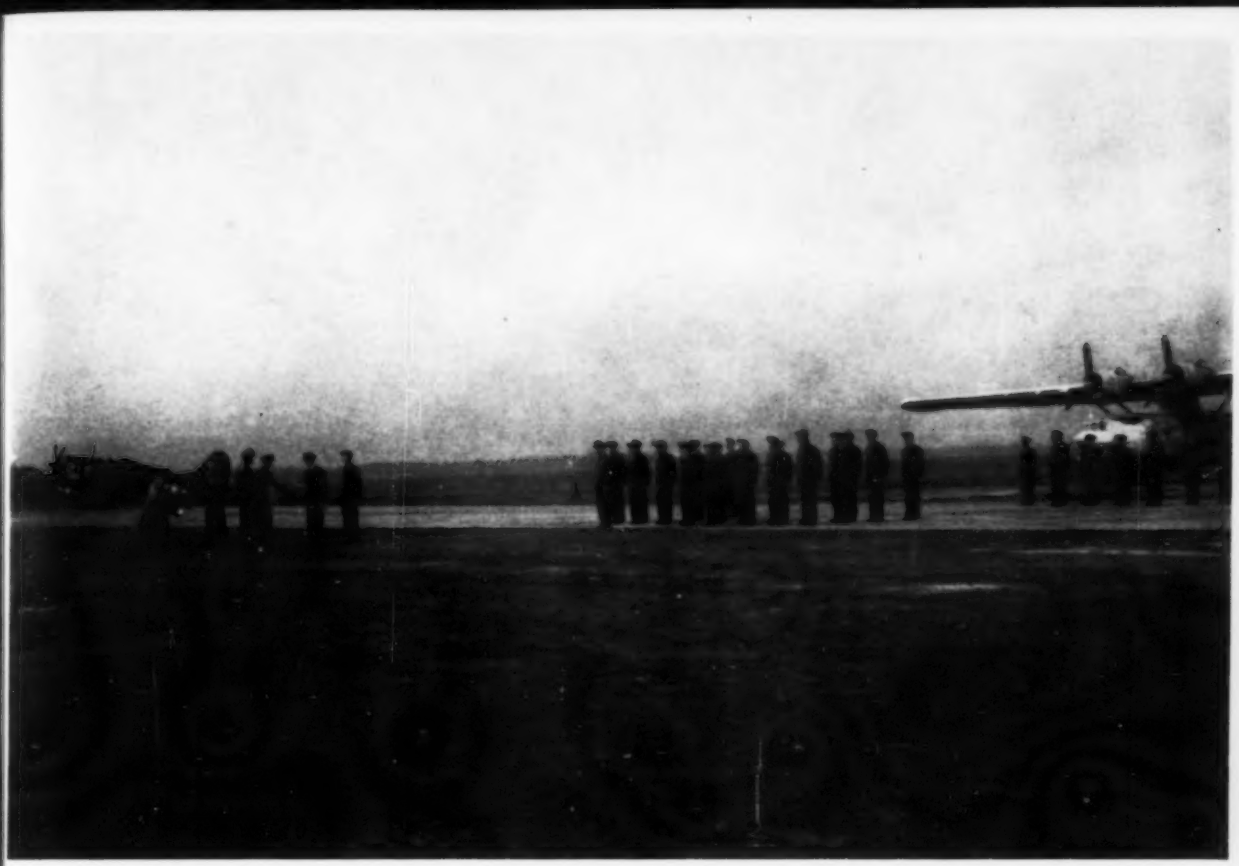
Since 1909 there has been an almost uninterrupted series of budworm outbreaks in Eastern Canada. The three most heavily infested areas in Ontario at the present time lie in a large block in the Mississagi district north of Lake Huron, and in smaller blocks in Algonquin Park and on the west side of Lake Nipigon. These three areas of heavy infestation comprise, in all, over 13,000 square miles in which trees are seriously damaged. Medium to heavy infestation, through which the balsam trees have begun to die, covers an additional area of 25,000 square miles in a band from the Quebec boundary across central Northern Ontario into the district of Thunder Bay. Areas of light infestation may be found over practically the whole of the remainder of Northern Ontario.

There is no such thing as a spruce-balsam forest completely immune from budworm attack. There is, however, a considerable difference in their capacity to resist destruction. Pure balsam stands succumb most readily; red and white spruce are often destroyed, especially when in association with balsam; black spruce, while not immune, is rarely damaged. That older stands should have less resistance than young ones is to be expected, but whether or not they are actually more severely attacked than young stands, and thus serve as focal points for outbreaks, has not yet been determined.

What, exactly, is the material damage done by the budworm? Apart from those trees which die almost immediately as a result of defoliation, those weakened by such defoliation sometimes recover temporarily, but only to succumb, finally, within six to ten years. The actual loss of increment during a period of years over a vast area riddled by budworm attack cannot be viewed lightly; such attacks have probably killed 200,000,000 cords of balsam and spruce in Eastern Canada during the last forty years. Further, the dead trees left in the wake of budworm infestation create a major fire hazard—a constant threat to the surrounding forest.

When a forest area is heavily infested it acquires, at first, a scorched appearance. Later, as defoliation progresses, and the dead and dying trees become more numerous, the general appearance is dull-greyish. After a severe attack, the trees in a stand continue to die, over a period of time, until they are virtually all wiped out.

How is an insect so damaging to our forest resources to be controlled? At present, there is no single answer to that vital question. One important means of control is by parasitic agencies—but, while there are some sixty parasites known to prey on the spruce budworm, nevertheless, under existing conditions all of these sixty combined are not sufficient to prevent budworm infestations. When any part of the forest has already become seriously endangered, it is too late to save it by means of imported



Early-morning view of Port Arthur Airport taken while DDT experiments were in progress. It was from this airport that R.C.A.F. spraying planes functioned. Note Canso aircraft on far right.

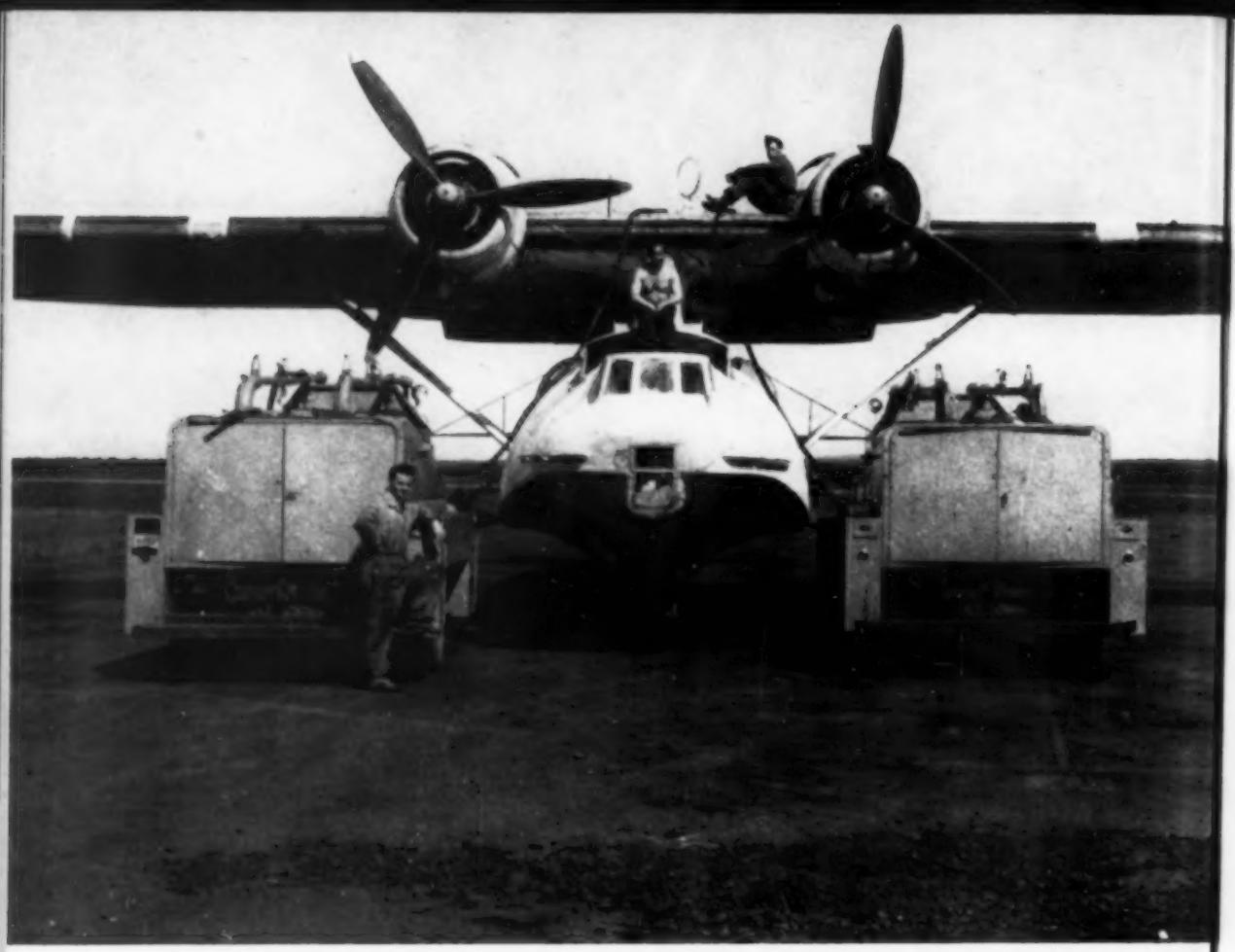
parasites. Large areas of Ontario's balsam forests are now beyond recovery, and others are so heavily infested that any hope of raising new populations of parasites to the level required for effective control is out of the question.

One method of salvaging at least part of the forest under immediate budworm threat is by cutting as much as possible. Here, however, the economic angle enters strongly into the picture; few companies can afford to take the chances involved in going to the great expense of opening up a sector of forest for lumbering operations only to discover that the timber stand has already become infested. Such salvage operations could only be undertaken safely on the recommendation of an experienced entomologist.

The only satisfactory answer to the budworm-devastation problem is one which will take time, money and vision, with close cooperation between governments and commerce. That answer is—*scientific forest management.* With the construction of sufficient permanent roads, employment of increased and expert staffs, timely utilization of older and weaker stands, and wider adoption of the approved methods of the science of silviculture, the budworm may be brought under full and permanent control. Obviously, however, such a policy cannot be put into immediate effect.

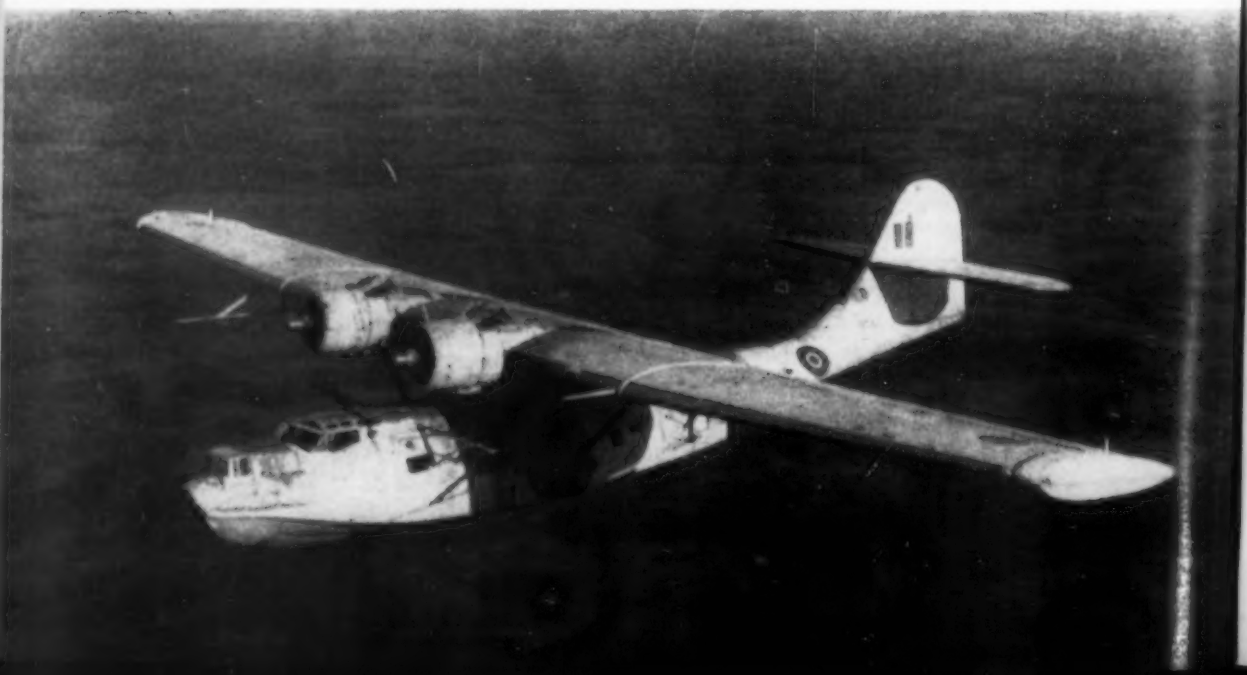
Other alternatives failing, only one hope now exists for immediate control of the budworm: *artificial* control by means of spraying and dusting. And it is here that DDT and insecticides in general enter the picture.

Sensing the great possibilities of DDT, the Ontario Department of Lands and Forests early planned to give it a trial in the Province's insect-plagued areas. Wartime difficulties in obtaining aircraft and insecticide delayed any major experiments until the spring of 1945. Prior to that date, however, a consultant board of scientific experts was set up to deal with the pros and cons of every phase of insecticide attack. This board, set



Front view of Canso aircraft, flanked on either side by R.C.A.F. service trucks. Special spraying device attachments—triangular shapes immediately behind wing struts—may be observed.

Canso aircraft cruising over spruce-balsam area. These large craft and their crews were leased by the Ontario Department of Lands and Forests from the R.C.A.F.



up in 1944, was composed of: Dr. Breckenridge, Professor Coventry, Professor Harkness, Dr. Langford, Professor T. R. Loudon, all of the University of Toronto; Mr. A. Thompson, Dominion Meteorological Service; Mr. H. H. McKay of the Ontario Department of Game and Fisheries; Mr. L. L. Snyder, Royal Ontario Museum; Mr. J. Savage, Consultant Biologist; and Mr. K. E. Stewart of the Dominion Entomological Service. In addition, valuable advice and guidance was given by Dr. F. C. Craighead of the United States Department of Agriculture; Mr. J. J. de Gryse, of the Dominion Entomological Service; and Mr. H. G. Crawford, Dominion Entomologist.

During this first year of small experimental tests, the flying was done by a commercial autogyro and a plane lent by the United States Department of Agriculture. One of the problems which came up in connection with early trial flights was the need for an aerial spray adjusted to the specific needs brought about by the low viscosity of the DDT spray solution. This problem was solved ingeniously by Dr. Loudon, one of Canada's leading aeronautical experts, and his device was used with great success in the large-scale tests of 1945.

The first concern of the 1944 tests was to find how DDT affected insect and animal life other than the budworm when applied in solutions of varying strength. The following extract from a Department of Lands and Forests circular will give some idea of the effect the insecticide was found to have on various forms of forest life.

EFFECT ON INVERTEBRATES:

Submerged forms in quiet water were apparently not affected, but where the spray film worked under partly exposed rocks insect larvae were completely killed, though eggs were unaffected.

Carnivorous insects, especially beetles, were little affected by the spray but died as a result of destruction of their food. Adult aquatic insects were killed by contact with the spray which also retards repopulation of the area.

Crayfish were especially sensitive, being killed by contact with spray in rapid water or by feeding on poisoned insects.

EFFECT ON VERTEBRATES:

Fish: Minnows in quiet pools are killed, probably by fouling their gills in the slick left by the spray. In rapid water the kill is negligible, although the fish fed heavily on killed insects. The amount of DDT in the water or present on the dead insects must have been extremely small, since laboratory experiments show DDT oil spray to be toxic to fish.

Speckled trout are sometimes killed by feeding on poisoned insects falling from the forest cover, and appear somewhat more sensitive to DDT's lethal effects than do minnows.

Amphibians and Reptiles: Six species of frogs and two of snakes were killed, either by eating poisoned food or through contact with spray. No difference in the susceptibility of species was found. It is estimated that mortality under field spray conditions would exceed fifty per cent of the population.

Birds: Eggs sprayed with DDT hatched normally and adults and young were not affected. Eating of poisoned food had little effect and only one young warbler and one adult grackle were found dead during the spraying, apparently from eating poisoned food.

Mammals (Mice, Chipmunk, Beaver, Deer): These animals were not affected by field concentrations of DDT spray, although it is possible to kill the smaller animals by heavy direct applications. Food contaminated with spray appears to have had no adverse effects.

Experiments are now being carried on to determine the effect of spray on reproduction of the smaller animals.

Plants: No damage was noted in coniferous trees. Injury to broad-leaved trees was variable, and the maximum was a severe marginal spotting on choke cherry leaves when covered with spray.

EFFECTS OF DDT ON THE SPRUCE BUDWORM:

Hand spray results on budworm larvae: A five per cent solution of DDT in cyclohexanone, kerosene and motor oil gave ninety-eight per cent kill on spruce and balsam in six days.

A ten per cent solution of the above gave one hundred per cent kill on spruce and balsam in six days.

Test of DDT spray showed no deterioration one week after mixing.

It is noteworthy that moths in the area sprayed by DDT were killed and, although in the centre of an infested area, the moths did not re-invade the area for the remainder of the season. It should also be noted here that DDT was *not* effective against eggs of pupae and only about ten per cent effective against young larvae seeking winter quarters. The best time to kill larvae is . . . after their emergence from winter quarters and before they enter the spruce buds.

Close-up of DDT spraying device designed by Professor T. R. Loudon of the University of Toronto.

With this knowledge gained in early experiments, all of which were made in Algonquin Park, the Ontario Department of Lands and Forests was ready, by May, 1945, to make a much more extensive trial. The testing ground selected was a valuable area of one hundred square miles of infested spruce and balsam stands in the Nipigon area of Port Arthur. The test was made at the expense of the Ontario Government, and all flying was done by the R.C.A.F. in four Canso Amphibian planes under contract to the Province. Fifty-two thousand pounds of DDT were applied, dissolved in as many gallons of coal oil and diesel fuel. Owing to poor flying weather, the spraying took more than a month to complete; it had been found impossible to spray effectively with the wind at a velocity greater than fifteen miles per hour.

The aerodrome at Fort William was chosen as the base of operations. The field has two runways in excellent condition, together with radio and meteorological facilities. All four Canso aircraft were modified for spraying by the previously-mentioned device designed by Professor Loudon which adjusts the amount of spray so that it is fine enough to assure adequate coverage of the infested area while not being so fine as to be ineffectively dispersed by the wind. The crews of the planes were all ex-operational fliers.

Two gasoline tenders were supplied by the R.C.A.F. to transport solutions from the tank cars of the Imperial Oil Company to the aerodrome. Since it is not yet known to what degree DDT may affect human beings, all of the personnel handling it were equipped with gas masks, gloves and overalls.

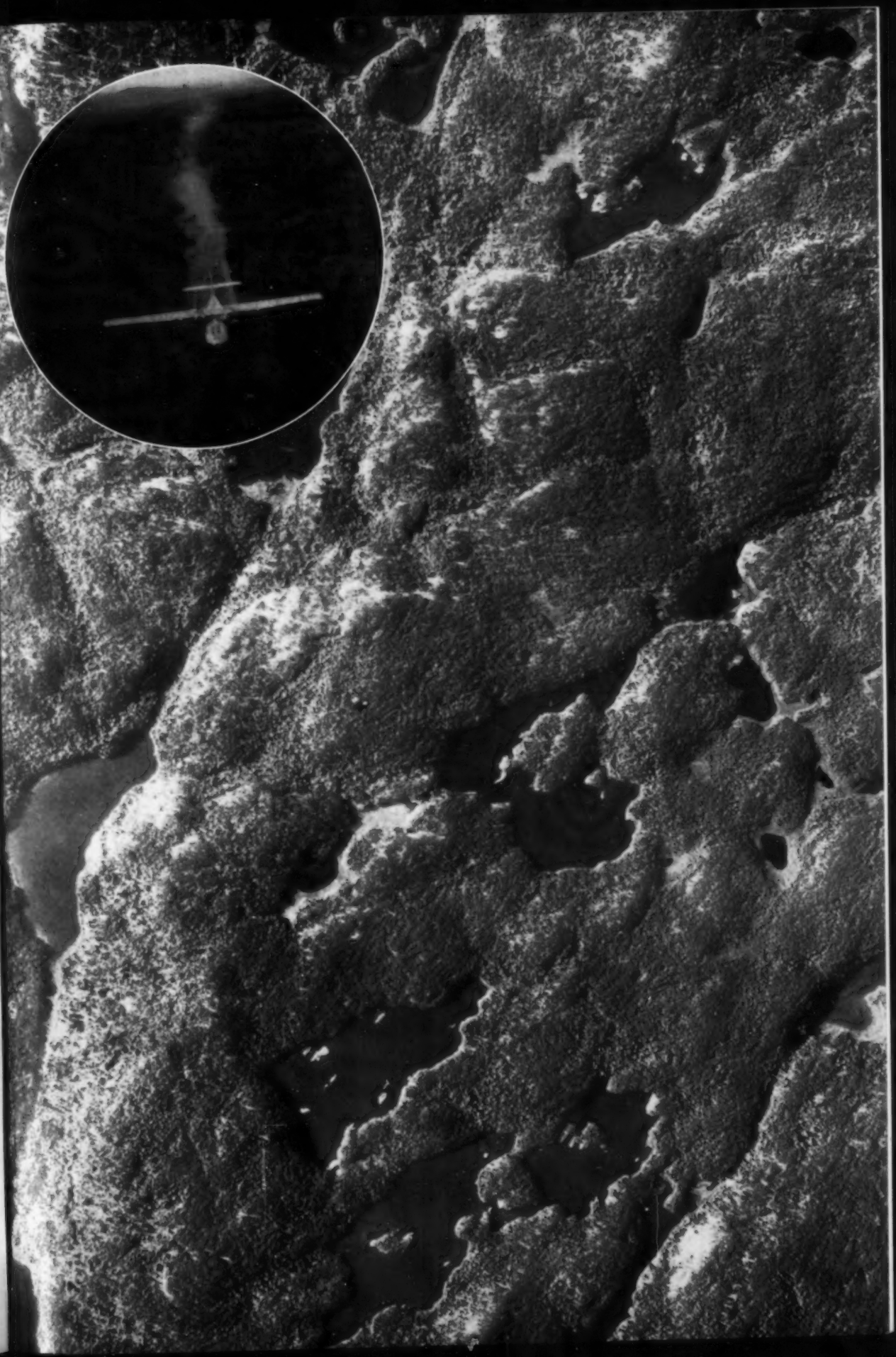
The 64,000 acres to be sprayed were marked on photographic maps in strips for the guidance of the plane crews. This assured complete coverage of the area, since the valves of the spraying device were opened or closed by crew members as the aeroplanes approached or left a specified area. Spraying plots were also marked, for further assurance of accuracy, by meteorological balloons about five feet in diameter.

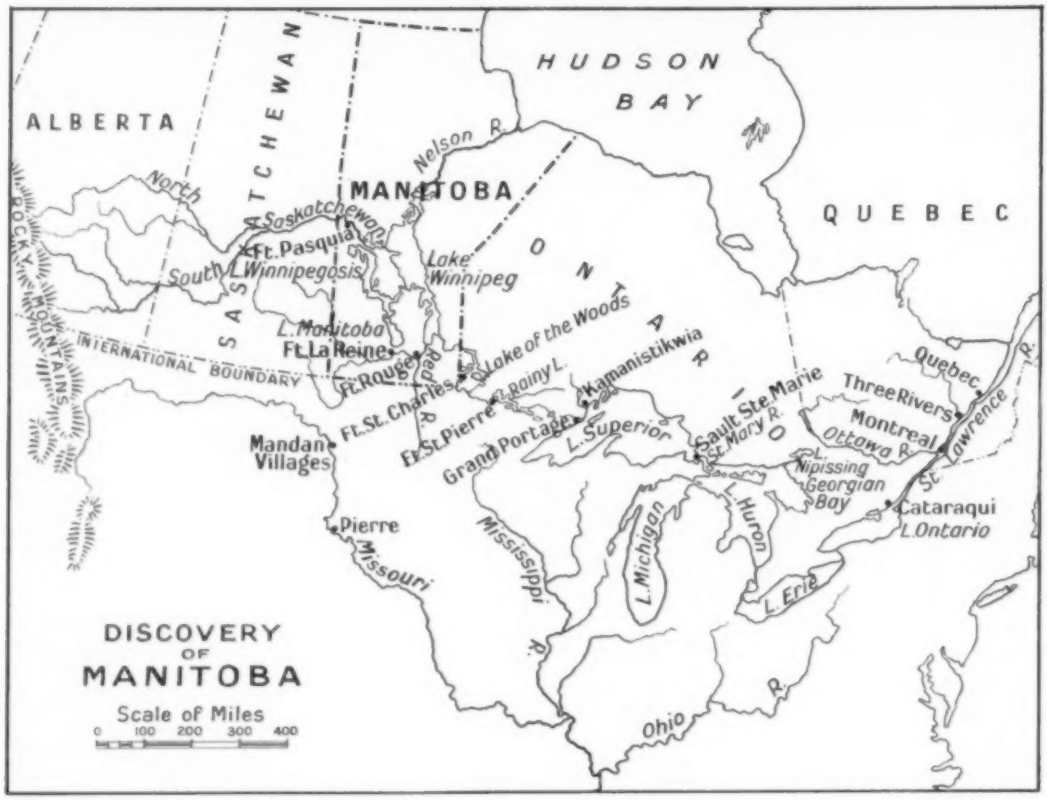
The last spraying run of the first great DDT forest experiment in Canada was made in early July. By then, approximately seventy thousand gallons of DDT solution had been distributed at a concentration of slightly more than a gallon to the acre. Altogether, the spraying required nearly three hundred hours of operational flying.

Final results of this extensive trial of DDT will not be known until some time in late fall or next year. Meanwhile, results observed to date are encouraging and suggest a kill of sixty-six to seventy per cent. Moreover, since DDT holds its lethal power over a considerable period of time, that figure is tentative, and the final one may be much higher.

However the final results of the Nipigon experiment turn out, it is apparent that in DDT (and its insecticide-relatives) we have, if properly used, a powerful ally against insect timber destroyers. It promises almost certain success if infestations can be located and treated while still in their early stages. This means that forest protection must be advanced to the point where all insect infestations are spotted and reported immediately—as is already the case with fires. This service (inaugurated in 1936 by the Forest Insect Survey conducted by the Division of Entomology, Dominion Department of Agriculture, with the co-operation of the field personnel of the provincial forestry departments and the forest industry) has already produced very valuable results, and will be greatly improved and expanded in the immediate future. It is felt that under such conditions DDT can save inestimable quantities of valuable timber from certain destruction, and, in so doing, conserve for the people of Ontario—and Canada as a whole—natural resources worth many millions of dollars.

Right:—Aerial view of a typical spruce-balsam area over which experiments were conducted.





C.G.J. map

The Discovery of Manitoba

by LAWRENCE J. BURPEE

IT IS USUALLY as difficult to say positively who discovered a particular place as it is to say who invented a particular thing. When you dig into the history of the steam engine or the flying machine or any one of a hundred human contrivances, you generally find that the invention was a gradual process to which many brains contributed, sometimes at wide intervals of time. Similarly, the discovery of a particular part of this or any other country has been, in most cases, the work of a number of travellers, some of whom were deliberate and others accidental pathfinders.

When we take the specific case of Manitoba, and ask ourselves who discovered that province, we find at the outset that we must decide what we mean by Manitoba, and what we mean by its discovery. Manitoba grew out of the Red River Settlement, which was a region of rather uncertain boundaries in the valley of the Red River. When Manitoba was added to the Dominion in 1870, its area was so small that it was called the postage stamp province. To-day it extends from the international boundary to Hudson Bay, and has an area of 251,832 square miles, eighteen times as great as the original area of the province. The overwhelming bulk of its population, however, is still in the area of the province of 1870.

It would be possible to argue that the original discoverer of Manitoba was Sir Thomas Button, who sailed into Hudson Bay in 1612, explored part of the sea-coast of what is now Manitoba, and wintered at the mouth of the Nelson River, which lies entirely within the province. It might be equally arguable that Henry Kelsey, a young employee of the Hudson's Bay Company, who before the end of the eighteenth century

had made his way inland, probably to the Saskatchewan River, and possibly to the prairie country west of Lake Winnipegosis, was also entitled to a share in the discovery.

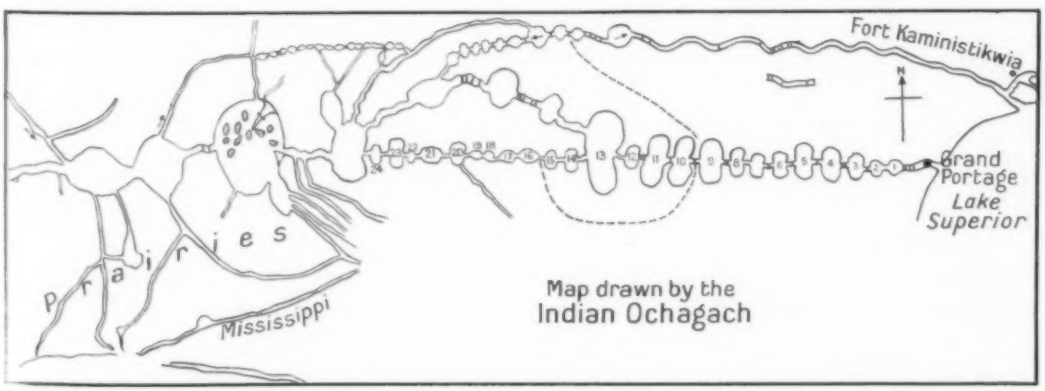
Button and Kelsey and several other early travellers may quite properly be counted among those who contributed to the discovery of Manitoba, but if we are looking for one who, because of the nature of his explorations, the completeness of his narrative, and the evidence of his original maps, is above all others entitled to be called the Discoverer of Manitoba, we must agree that he was La Vérendrye, or, to give him his full name, Pierre Gaultier de Varennes, Sieur de La Vérendrye.

La Vérendrye was born in the town of Three Rivers, on the St. Lawrence, in 1685, and it is one of the facts worth remembering about him that he alone of the great explorers of Canada, British as well as French, was born in Canada. His early life we need not be concerned with at this time. In 1731 he left Montreal, determined to find an overland route to that Western Sea that had been the goal of many earlier adventurers. Following the well-established route up the Ottawa River, and by way of Lake Nipissing to Georgian Bay and Lake Huron, La Vérendrye and his men ascended the St. Mary's River to the mission and fur-trading post of Sault Ste. Marie, and then skirted the bold northern coast of Lake Superior to Grand Portage.

From this western, or northwestern, shore of Lake Superior several water routes led towards the west. With the exception of one, by way of the Kaministikwia River, that seems to have been used by Robutel de La Noue in 1717, these routes in La Vérendrye's day were known only to the Indians. An Indian named Ochagach drew a map for him showing these portage routes and a number of smaller lakes leading to a great body of water which, from the Indian's account, might be the sea.

Ochagach apparently recommended what was to become famous as the Grand Portage route to Rainy Lake and the Lake of the Woods—to-day the international boundary—and the explorer decided to travel that way into the unknown west, and to that Western Sea that seemed to be within his grasp. His men, however, because they had heard evil rumours of the country beyond Lake Superior, or were afraid of the tribes that dwelt there, mutinied and would go no farther. He finally persuaded a few of them to go on to Rainy Lake with his nephew, La Jemeraye, while he with the rest wintered at the mouth of the Kaministikwia, where La Noue had built a post, and where the city of Fort William now stands.

In the spring of 1732 La Vérendrye followed La Jemeraye to Rainy Lake, where the nephew had built Fort St. Pierre, on Pither's point at the outlet of the lake, now part of the town of Fort Frances. From there the entire party pushed on down Rainy River to the Lake of the Woods, and across that beautiful lake to the North West Angle Inlet, where they built Fort St. Charles. The fort stood on that oddly-isolated fragment of Minnesota that was cut off from the rest of the United States when the international boundary was run south of the North West Angle Inlet until it met the 49th parallel in the middle of



the southwestern bay of the Lake of the Woods.

Difficulties and disasters prevented La Vérendrye from getting any farther in his search for the Western Sea for several years, but by 1737 he had made his way to Lake Winnipeg, which he found was not the sea, and up the Red River to its junction with the Assiniboine, where he built Fort Rouge in what is now the city of Winnipeg. Paddling up the Assiniboine to where a portage path led north to Lake Manitoba, he built Fort La Reine, on land now covered by the city of Portage la Prairie.

At Fort La Reine, La Vérendrye was well out on the prairies of Manitoba, and he seems to have realized that he was still a long way from the Western Sea—the Pacific Ocean. In 1738 nothing was known of the Pacific Coast north of the Spanish discoveries in California, and the maps of the period were based on the wildest guesses. The sea might be anywhere from a hundred to several thousand miles from Fort La Reine. Wherever it was, this French-Canadian explorer was determined to reach it, if humanly possible.

He was now starting from his post on the Assiniboine on an overland journey to the Mandan Indian villages on the Missouri, and already had some knowledge of the Saskatchewan, on which his men built Fort Pasquia where the town of The Pas stands to-day. He was to attempt to find routes by both these great rivers to the ocean before he was through, and, though he failed, he did add materially to our knowledge of the great interior plain of North America, and, in particular, the exploratory journeys of himself and his sons covered much of the southern half of the Province of Manitoba.

On this journey of 1738-39, he fell in with a large party of Assiniboine Indians, and visited one of their villages. In his journal he describes their method of hunting buffalo. It is to be remembered that at this time the Assiniboines, afterwards famous horsemen, knew nothing of the horse, and had to do their hunting on foot. Dogs and women were their only beasts of burden. This is what he has to say in his journal:

"The marching order of the Assiniboine villagers, especially when they are numerous, is in three columns, the scouts in front, the wings extending back to a good rearguard; the old and disabled march in the main body which is in the middle. I had all the Frenchmen kept together as much as possible.

"If the scouts perceive any herds of buffalo on the way, as often happens, a cry is raised which is quickly heard by the rearguard, and all the most active men in the columns join the vanguard so as to surround the beasts, numbers of which they kill, whereupon each man takes all the meat he wants.

"As that arrests the march, the vanguard marks out the camping ground and no one must go any farther. The women and the dogs carry all the baggage. The men carry only their arms. They often make their dogs carry firewood even, as they frequently have to camp in mid-prairie, the clumps of trees only occurring at distant intervals."

The result of La Vérendrye's visit to the Missouri was an expedition to the far southwest in 1742-43, in search of the sea. He was taken ill at Fort La Reine, and could not go, but sent two of his sons. They travelled from tribe to tribe, until they finally came to one of the outlying spurs of the Rocky Mountains, where they were turned back by hostile natives. On the return journey they deposited a copper plate with an inscription taking possession of the country in the name of Louis XV of France. One hundred and seventy years later school children digging in the sand on the banks of the Missouri, in Pierre, South Dakota, found the plate, which is now preserved in the State Historical Museum.

Like many other men who have given their lives to high ideals, La Vérendrye received no credit in his lifetime, but rather slanderous abuse, and it has remained for our own generation of Canadians to elevate his name to the approximate position it deserves in Canadian history.

EDITOR'S NOTE-BOOK

C. M. Short, after nearly forty years of banking experience, is now Supervisor of Statistical Research for The Canadian Bank of Commerce, Head Office, Toronto. A native of Sherbrooke, Quebec, he entered The Eastern Townships Bank in 1906 as a junior clerk, joining The Canadian Bank of Commerce when it amalgamated with the former institution in 1911. After serving in various clerical and accounting posts in both banks, Mr. Short was made Assistant Manager of The Canadian Bank of Commerce at Victoria, British Columbia, in 1920. He joined the Commerce Head Office late in 1925, and has since engaged in economic surveys for that institution. It has been under his direction that the *Monthly Commercial Letter* of this bank has been issued, in which the results of much original economic research have appeared.

* * *

Ashley Gibson, well-known British authority on Southeast Asia, was formerly newspaper editor in Malaya and Ceylon, and is the author of standard works on those countries. During World War II, he served for nearly four years as an administrative officer in the Royal Air Force.

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Arthur Neal—See C. G. J. for March (biographical sketch), May and August, 1945.

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Lawrence J. Burpee—See C. G. J. for April (biographical sketch), May and July, 1945.

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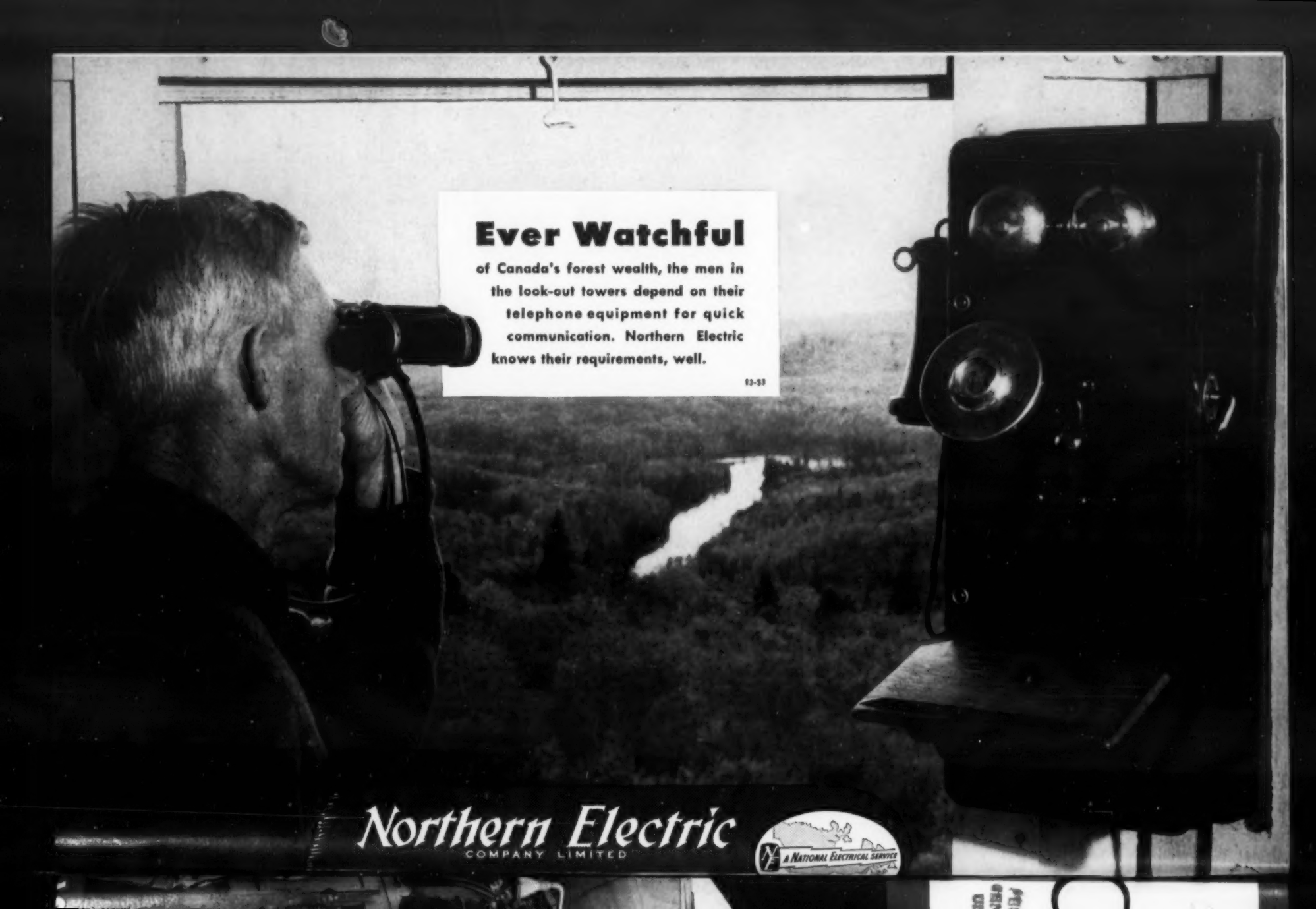
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